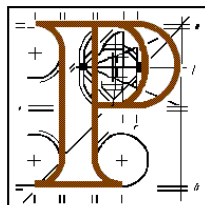


An Bord Pleanála



Inspector's Report

Proposed Development

Wind Farm Development at Glenard, Carrowmore or Glentogher, Meenyanly, Illies, Sorne, Carnamoyle, Owenkillew and Barnahone, Meenakeeragh, Tullydush Upper, Annaslee and Ballynahone, County Donegal

Applicant:	Futureenergy Glenard Designated Activity Company
Type of Application:	Application for approval under section 37E of the Planning and Development Act 2000, as amended
Date of Site Inspection:	10 th & 11 th November, 2022
Inspector:	Kevin Moore

CONTENTS

	<u>Page</u>
1.0 INTRODUCTION	5
2.0 SITE LOCATION AND DESCRIPTION	5
3.0 DESCRIPTION OF PROPOSED DEVELOPMENT	6
4.0 PLANNING HISTORY	8
5.0 LOCAL PLANNING POLICY CONTEXT	8
6.0 SUBMISSION FROM DONEGAL COUNTY COUNCIL	15
7.0 OBSERVATIONS	18
7.1 The Department of Housing, Local Government and Heritage	18
7.2 Transport Infrastructure Ireland	19
7.3 Inland Fisheries Ireland	19
7.4 Northern Ireland Planning Service	19
7.5 Donal Doherty	22
8.0 APPLICANT'S RESPONSE TO OBSERVATIONS	22
9.0 OBSERVER RESPONSES TO APPLICANT'S RESPONSE	53

	<u>Page</u>
10.0 PLANNING ASSESSMENT	54
10.1 Introduction	54
10.2 Need for the Proposed Development	54
10.3 Compatibility with Renewable Energy Policy	55
10.4 The Management of Waste Materials	57
10.5 Site Drainage	59
10.6 Impact on Biodiversity	67
10.7 Shadow Flicker	75
10.8 Noise Impact	77
10.9 Traffic Impact	85
10.10 Landscape and Visual Impact	88
10.11 The Grid Connection	108
10.12 Impact on Donal Doherty's Landholding	109
 11.0 ENVIRONMENTAL IMPACT ASSESSMENT	 111
11.1 Introduction	111
11.2 Alternatives	111
11.3 Population and Human Health	112
11.4 Biodiversity	115
11.5 Land, Soils and Geology	119
11.6 Water	121

	<u>Page</u>
11.7 Air Quality and Climate	124
11.8 Noise and Vibration	125
11.9 Landscape and Visual	125
11.10 Cultural Heritage	126
11.11 Material Assets	127
11.12 Cumulative Impacts	128
11.13 Interaction of Impacts	129
11.14 Major Accidents	129
11.15 Transboundary Effects	130
11.16 Reasoned Conclusion	132
 12.0 APPROPRIATE ASSESSMENT	 134
12.1 Screening for Appropriate Assessment	134
12.2 Appropriate Assessment	149
 13.0 RECOMMENDATION	 158

1.0. **Introduction**

- 1.1. This is an application by Futureenergy Glenard Designated Company seeking permission from An Bord Pleanála under section 37E of the Planning and Development Act 2000, as amended, for the construction of a wind farm development in the townlands of Glenard, Carrowmore or Glentogjher, Meenyanly, Illies, Sorne, Carnamoyle, Owenkillew and Barnahone, Meenakeeragh, Tullydush Upper, Annaslee and Ballynahone in County Donegal. This follows pre-application consultation with An Bord Pleanála under Ref. ABP-310369-21. The Board concluded that a 15-turbine wind farm with associated infrastructure and overall output of 72 MW and associated connection to the electricity grid infrastructure on a site in the townlands of Glenard, Meenyanly, Ture and Aught on the Inishowen peninsula, County Donegal constituted development that falls within the definition of energy infrastructure in the Seventh Schedule of the Planning and Development Act 2000, as amended, satisfying the requirements set out in Section 37(A)(1) of the Act. The proposed development was also considered to be of strategic importance by reference to the requirements of Section 37(2)(a) and 37(2)(b) of the Planning and Development Act, as amended. This determination has resulted in the application being made directly to the Board.

2.0 **Site Location and Description**

- 2.1. The 951 hectare site of the proposed wind farm development is located on the Inishowen Peninsula, approximately 6km east of Buncrana in County Donegal. Lough Swilly is located approximately 9km to the west of the site and Lough Foyle is located approximately 7km to the east. The site is upland, mainly situated on the north-western facing slopes of Crocknacraggy Hill, the highest point of which is 360m OD and is just beyond the south-eastern corner of the site. The northern section of the site slopes in a north-westerly direction towards the Crana River at the north-western boundary. The southern section of the site is on the south-western facing slopes of Crocknacraggy Hill and the southern slopes of Sorne Hill which slope towards the Owenkillew River, which is under 0.5km to the south of the site. The site is mostly in commercial forestry. The land is originally mainly covered in

blanket bog, with man-made drainage throughout. Existing access to the site is from a local road to the north-east and a local road to the south-west. There is a network of forestry roads through the site, many of which are accessed from the local road to the north-east.

- 2.2. The proposed grid connection route linking the proposed on-site substation to the existing Trillick 110kV substation, which is located approximately 5.5km to the south-east of the site, would mainly be on narrow public roads.
- 2.3. The two proposed link roads as part of the accommodation works would be located adjacent to forestry and grassland habitats.

3.0 **Description of Proposed Development**

3.1. The proposed development would comprise:

- Construction of 15 no. turbines and associated hardstand areas with the following parameters:
 - A total tip height in the range of 162 metres minimum to 173 metres maximum,
 - Hub height in the range of 96 metres minimum to 107 metres maximum, and
 - Rotor diameter in the range of 132 metres minimum to 140 metres maximum;
- 1 no. 110kV permanent electrical substation including a control building with welfare facilities, all associated electrical plant and equipment, security fencing, all associated underground cabling, wastewater holding tank and all ancillary structures and works;
- All works associated with the permanent 110kV connection from the proposed substation to the national electricity grid, via underground cabling within permanent cable ducts in the townlands of Meenyanly, Carnamoyle, Sorne, Owenkillew and Bornahone, Meenakeeragh, Tullydush Upper, Annaslee and

Ballynahone to the existing Trillick 110kV substation in the townland of Ballynahone;

- 1 no. Meteorological Mast 104 metres in height;
- Upgrade of existing tracks and roads, provision of new permanent site access roads including a new site entrance (in the townland of Glenard);
- 1 no. borrow pit;
- 1 no. permanent peat and spoil repository area;
- Permanent placement of peat and spoil along sections of site access roads as part of the peat and spoil management plan for the site;
- 2 no. temporary construction compounds;
- Permanent recreation and amenity works, including marked trails, seating areas, amenity car park, and associated amenity signage;
- All temporary works associated with the facilitation of turbine components and abnormal load delivery;
- Construction of a permanent link road between the R240 Regional Road and the L1731 local road; construction of a second permanent link road on the L1731; permanent road widening at three locations along the L1731 (in the townlands of Carrowmore or Glentogher and Illies) all of which will facilitate the delivery of abnormal loads to the site during the construction period and may be used during the operational period if necessary or to facilitate the decommissioning of the wind farm. Following the construction period, access to the link roads will be closed off;
- Site drainage;
- 80.5 hectares of forestry felling to facilitate construction and operation of the proposed development; and
- All associated site development works.

3.2. The application seeks a ten-year permission and 35-year operational life from the date of commissioning. It is proposed that the export capacity would range from a minimum of 60MW to a maximum of 93MW.

- 3.3. Details submitted with the application include an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS).
- 3.4. The application includes letters from property owners giving consent to the making of the application.

4.0. Planning History

P.A. Ref. 20/51328

Permission was granted in 2021 for the retention of an 80m high meteorological mast and associated instrumentation for a period of five years.

5.0. Local Planning Policy Context

5.1. Donegal County Development Plan 2018-2024

Energy

Energy Objectives include:

- E-O-1: To develop sustainably a diverse and secure renewable energy supply to meet demands and capitalise on the County's competitive locational advantage.
- E-O-4: To facilitate a sustainable and diverse mix of developments which limit the net adverse impacts associated with global warming such as promoting renewable energy, the growth of local farm produce and the promotion of sustainable modes of public transport.
- E-O-5: To ensure that wind energy developments meet the requirements and standards set out in the DEHLG Wind Energy Development Guidelines 2006, or any subsequent related Guidelines (or as may be amended).
- E-O-6: To ensure that wind energy developments do not adversely impact upon the existing residential amenities of residential properties, and other centres of human habitation (as defined at Para. 6.6, 'Wind

Energy', Appendix 3, Development Guidelines and Technical Standards, Part B, Objectives and Policies of the Plan).

E-O-7: To secure the maximum potential from the wind energy resources of the planning authority's area commensurate with supporting development that is consistent with proper planning and sustainable development.

Policies for wind energy include:

E-P-12: It is a policy of the Council that the principle of the acceptability or otherwise of proposed wind farm developments shall be generally determined in accordance with the three areas identified in Map 8.2.1 'Wind Energy' and the specific biodiversity related requirements detailed below:

1. Areas in Map 8.2.1 Wind Energy:

(a) Acceptable In Principle Wind energy development shall be generally acceptable in these areas.

(b) Open to Consideration Wind energy development shall be generally open to consideration in these areas.

(c) Not Normally Permissible

(i) Windfarm development proposals on previously undeveloped sites, inclusive of sites with a lapsed un-implemented permission (and where substantive works have not been undertaken) will not normally be permissible.

(ii) The augmentation, upgrade and improvements of: existing windfarms; windfarm developments under construction; developments where permission has lapsed but substantial works have been completed, or on sites with an extant planning permission will be open to consideration where such proposals shall be generally confined to the planning unit of the existing development.

2. Specific Biodiversity Related Requirements:

a) Loss of functionally linked habitat

Developers of wind energy proposals on greenfield sites shall undertake a pre-construction appraisal of habitats. Should habitats suitable for supporting Special Conservation Interest bird species be present, developers will be required to undertake pre-construction bird surveys to confirm whether the site supports a significant proportion of bird populations (typically taken to be 1% of the population of a SPA, at time of designation). Depending on whether qualifying birds represent breeding or overwintering species, surveys will need to be undertaken in the breeding season or overwintering period (October to March). If a site represents functionally linked habitat, avoidance / mitigation measures will be required and the proposal will need to be supported by a bespoke Appropriate Assessment.

b) Mortality due to collision with operational wind turbines

Wind energy development proposals shall demonstrate that they can be delivered without resulting in adverse effects on the integrity of European sites. Vantage point surveys will be required to establish a) the overall use of the development site by Special Conservation Interest birds and b) more detailed usage by Special Conservation Interest birds of the turbine swept area taking account of specifications such as turbine height, blade length, nacelle (blade hub) rotation speed and the number of turbines. Mitigation measures may need to be delivered to ensure that any residual risks are appropriately avoided or reduced.

c) Disturbance displacement

To avoid potential permanent disturbance displacement impacts on Special Conservation Interest bird species, Donegal County Council will generally not support wind energy proposals within 1km of Special Protection Areas unless clear evidence from the applicant or scheme promoter can demonstrate no adverse effect on site integrity will arise.

d) Water quality

Any wind energy developments within 1 km of sensitive SPAs / SACs shall ensure that potential adverse impacts on the European sites due to water quality impacts are assessed and, where required, mitigated. Possible assessments and mitigation measures include, but are not limited to, water quality and ecological baseline studies, run-off / leachate modelling, delivery of Construction Environmental Management Plans (CEMPs) and Water Management Plans (WMPs) and compliance with industry good practice.

- E-P-17: It is a policy of the Council to ensure that all roads associated with the development of wind farms are maintained or repaired at the developer's expense to the satisfaction of the Council.
- E-P-18: It is a policy of the Council that potential impacts on natural, built and cultural heritage including impacts on archaeological monuments and watercourses are assessed as part of renewable development proposals. Where such impacts are identified, mitigation measures such as buffer zones, separation distances and access arrangements should be employed as appropriate.
- E-P-20: It is the policy of the Council that all proposals for renewable energy development will have regard to the cumulative effect of the development on the environment when considered in conjunction with other existing and permitted developments in the area.
- E-P-21: It is the policy of the Council that all applications for renewable energy projects will ensure that details of the proposed grid connection and all associated infrastructure are considered in the Environmental Impact Statement (EIS) and Natura Impact Statement as may be required.

Natural Heritage & Landscape

The Plan notes that the Donegal landscape is a valuable national and local asset that requires sustainable management to facilitate development and growth whilst also retaining, conserving and protecting the character, quality and resultant value of its landscapes. The landscape of the county has been categorised into three layers of value and are illustrated on Map 7.1.1 of the Plan. These 3 Layers of value have been classified as areas of ‘Especially High Scenic Amenity’, areas of ‘High Scenic Amenity’ and areas of ‘Moderate Scenic Amenity’. The majority of the site is within an area designated ‘Moderate Scenic Amenity’, with the remainder in areas designated ‘High Scenic Amenity’. The definitions for each of these areas of landscape value and classification are as follows:

“Areas of Moderate Scenic Amenity are primarily landscapes outside Local Area Plan Boundaries and Settlement framework boundaries, that have a unique, rural and generally agricultural quality. These areas have the capacity to absorb additional development that is suitably located, sited and designed subject to compliance with all other objectives and policies of the Plan.”

“Areas of High Scenic Amenity are landscapes of significant aesthetic, cultural, heritage and environmental quality that are unique to their locality and are a fundamental element of the landscape and identity of County Donegal. These areas have the capacity to absorb sensitively located development of scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape, subject to compliance with all other objectives and policies of the plan.”

Objectives include:

NH-O-1: To protect, sustainably manage and enhance the rich biodiversity of County Donegal for present and future generations.

NH-O-5: To protect, manage and conserve the character, quality and value of the landscape having regard to the proper planning and development

of the area, including consideration of the scenic amenity designations of this plan, the preservation of views and prospects and the amenities of places and features of natural, cultural, social or historic interest.

NH-O-10: To maintain and restore ecosystems and to conserve valuable or threatened habitats and species in order to prevent further loss of biodiversity and to meet the EU's target to halt biodiversity loss by 2020 through the implementation of the EU Biodiversity Strategy (2011) or as updated.

NH-O-11: To ensure the conservation and management of Peatlands in the County.

Policies include:

NH-P-5: It is a policy of the Council to require consideration of the impact of potential development on habitats of natural value that are key features of the County's ecological network and to incorporate appropriate mitigating biodiversity measures into development proposals.

NH-P-7: Within areas of 'High Scenic Amenity' (HSC) and 'Moderate Scenic Amenity' (MSC) as identified on Map 7.1.1: 'Scenic Amenity', and subject to the other objectives and policies County Donegal Development Plan 2018-2024 (As Varied) Part B: Objectives and Policies of the Plan Chapter 7: The Natural and Built Heritage Page 136 of this Plan, it is the policy of the Council to facilitate development of a nature, location and scale that allows the development to integrate within and reflect the character and amenity designation of the landscape.

NH-P-8: It is the policy of the Council to safeguard the scenic context, cultural landscape significance, and recreational and environmental amenities of the County's coastline from inappropriate development.

- NH-P-9: It is the policy of the Council to manage the local landscape and natural environment, including the seascape, by ensuring any new developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of the area.
- NH-P-13: It is a policy of the Council to protect, conserve and manage landscapes having regard to the nature of the proposed development and the degree to which it can be accommodated into the receiving landscape. In this regard the proposal must be considered in the context of the landscape classifications, and views and prospects contained within this Plan and as illustrated on Map 7.1.1: 'Scenic Amenity'.
- NH-P-15: It is a policy of the Council to safeguard prominent skylines and ridgelines from inappropriate development.
- NH-P-17: 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 situated on lands between the road and the sea, lakes or rivers shall be considered on the basis of the following criteria:
- Importance value of the view in question.
 - 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.

Development Guidelines and Technical Standards

6 *Wind Energy*

The guidelines include the following:

- 6.3 No fencing should occur on any part of the site except for around ancillary developments such as substations.
- 6.4 All grid cable connections within the site should be undergrounded.
- 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.
 - (c) Areas identified as locations where wind farm development would not be acceptable as identified on map 8.2.1, chapter 8 of the County Development Plan 2018-2024.
 - d) Special Areas of Conservation (SACs) nor Special Protection Areas (SPAs)
 - (e) The 6 Fresh Water Pearl Mussel (S.I. 296 of 2009) catchments contained in the Freshwater Pearl Mussel Sub-Basin Management Plans for Clady, Eske, Glaskeelin, Leannan, Owencarrow and Owenea.
 - (f) A set back distance of ten times the tip height of proposed turbines from residential properties and other centres of human habitation.

6.0. Submission from Donegal County Council

- 6.1. The Council's submission may be synthesised as follows:

National Energy Policy

- The proposal is consistent with national policies and climate change policies and targets for achieving a low carbon, climate resilient and environmentally sustainable economy by 2050. It is consistent with the National Planning

Framework, the Regional Spatial and Economic Strategy Northern and Western Region 2020, and the National Wind Farm Guidelines.

Local Planning Policy

- The site is within an area which was designated 'Open to Consideration' in the Donegal County Development Plan.
- The proposal is consistent with Development Plan objectives E-O-1, E-O-4, E-O-5, and E-O-6 and policies E-P-2, E-P-10, E-P-14, E-P-17, E-P-18, E-P-19, E-P-20, and E-P-21.

Landscape Scenic Amenity Value

- The majority of the site is within an area designated an Area of Moderate Scenic Amenity, with a small portion in an Area of High Scenic Amenity. The amenity value of the landscape allows consideration of the proposed wind farm development.

Potential Impact on European Sites

- Subject to mitigation measures being implemented that are set out in the Natura Impact Statement, the proposal would not have significant adverse impact on the qualifying interests of Natura 2000 sites.

Borrow Pit

- The proposed borrow pit represents an efficient use of on-site resources and eliminates the need to transport large volumes of material along the public road network.

Peat and Spoil Management

- The proposal to reinstate the borrow pit with peat and overburden and to place peat along the side of the new access road represent a sustainable use of excavated material.

Works to Existing Road Infrastructure

- The Council's Roads Authority has expressed reservations in relation to the undergrounding of the grid connection within the public road infrastructure. These reservations relate to constraints being placed on future road maintenance, interference with and destabilisation of road infrastructure, introduction of a significant obstacle to local development accessing existing underground services, the Council being responsible for costs associated with diversions or outages to facilitate future road works, and the effect on the ability of other utilities to use the same public road.
- The Board is asked to attach a condition (set out in the submission) requiring works that impact on roads to be agreed and the possibility of a requirement for a security bond to be put in place.
- There is no objection to the provision of the two link roads along the haulage route.

Shadow Flicker

- The mitigation measures to address shadow flicker are deemed acceptable.

Hydrology and Hydrogeology

- The Board is asked to assess the impact that all physical development will have on the existing drainage on the site.
- The Board is asked to carry out a rigorous and robust assessment of the potential environmental effects at the watercourse crossings associated with the grid connection works and to ensure appropriate mitigation is implemented.

Peat Instability and Failure

- The planning authority notes the Geotechnical and Peat Stability Assessment which illustrates that there is a low risk of peat failure as a result of the proposed development and subject to the implementation of proposed control measures.

6.2. The report concludes by requesting that, should the Board positively consider the proposed development, it will have full regard to:

- the potential environmental and ecological impact of the works associated with the grid connection cabling works, particularly at the 6 bridge crossings and 5 culvert crossings,
- the reservations of the Roads Authority,
- the existing hydrology of the site and ensure that on-site drainage remains in situ, and
- the application of adequate security bonds and appropriate development contributions.

7.0. Observations

The Observations received by the Board may be synthesised as follows:

7.1. The Department of Housing, Local Government and Heritage

The Department notes the location of a Hen Harrier roost on site and welcomed the revised design. However, the Department remains concerned that the extent of data available to inform the EIA and the mitigation proposed for breeding and wintering raptor species is inadequate. Referring to a published leaflet by the applicant locating the roost site for Hen Harrier to an accuracy of 750m, it is submitted that identifying such a sensitive site is not best practice and may result in deliberate disturbance. Noting the majority of bird surveys was undertaken in the 2016-2019 period, reference is made to advice that data used in ecological assessment should be gathered within 2-3 years of the application. The Department requests further information on all threatened bird species recorded during the 2021-2022 breeding and wintering seasons, as well as an assessment and/or comparison of Hen Harrier data from 2020/2021 – 2021/2022 roost seasons. Noting the volume of Hen Harrier (both breeding and roosting), Golden Eagle and Merlin activity, it is submitted that the risks to these species are not fully considered and/or mitigated, with raw data indicating that breeding Hen Harrier may be a consideration on site but with no scientific rationale provided for discounting this probability. It is further noted that the post-construction bird monitoring programme does not detail the response and/or action to be taken if Hen Harrier or Golden Eagle carcass finds are recorded. The

Department concludes by highlighting that an EIA should not have lacunae or gaps and should contain complete, precise and definitive findings and conclusions, with projects being authorised only if they are certain of the outcome on protected species of International interest, including Annex I birds species in the Birds Directive.

7.2. Transport Infrastructure Ireland

TII submits that it has no observations to make on the application.

7.3. Inland Fisheries Ireland

IFI notes the main surface waters within the catchment and their importance for freshwater fish. It is submitted that all of the small streams within the catchment area of the wind farm play a significant role in providing aquatic habitat for species like eel and trout. The effects of poorly managed development projects and the discharge of contaminated surface water runoff are noted. IFI sets out guidance that is required to be followed through the duration of the development. This includes fuel storage, drainage provisions, peat storage, implementation of proposed mitigation measures, managing invasive species, and having a suitably qualified person on site for the duration of the works to ensure mitigation measures are implemented, continual assessment of these measures, the cessation of works should slippage indicators develop or settlement arrangements are inadequate, peat reinstatement is completed, and arrangements are established in relation to a contact protocol.

7.4. Northern Ireland Planning Service

The submission consists of submissions from City of Derry Airport, Derry City & Strabane District Council, Department for Infrastructure, Department for Communities, Northern Ireland Water, Department of Agriculture, Environment and Rural Affairs, and RSPB Northern Ireland. These may be synthesised as follows:

City of Derry Airport

The City of Derry Airport is content with the development as proposed. It will have no adverse effect on the airport operations.

Derry City & Strabane District Council

The Planning Committee Members have no comments they wish to make on the application.

The Environmental Health Service's main concern relates to sound emissions that could potentially affect the amenity of properties in close proximity to the turbines. Noting the nearest property in the Derry City and Strabane District Council area to the turbines is in excess of 7km, it is considered that it is unlikely that the cumulative noise emissions from the proposed wind farm and other existing wind farms in the area would adversely affect the amenity of properties in the District Council area. It was concluded, therefore, that the Council has no objection in principle to the proposed wind farm.

Department for Infrastructure

The DfI Rivers Planning Advisory & Modelling Unit notes the proposed development is hydrologically unconnected to Northern Ireland and there are no concerns about flood risk to Northern Ireland.

The DfI Roads Section, noting the haul route for abnormally sized loads is from Foyle Port via Foyle Bridge and the A2 Culmore Road in Derry City, refers to consent procedures for abnormal loads, the need for pre-work survey works, the requirement to agree an inspection regime to establish and monitor road condition and how repairs would be undertaken, and the requirement to agree the final works traffic management plan for works within Northern Ireland. A schedule of its requirements is set out.

The Department for Communities

The Historic Environment Division is content that the proposal is satisfactory to archaeological policy requirements.

Northern Ireland Water

It is submitted that the proposed development would not have any impact on existing NI water infrastructure. There are no concerns regarding the proposal.

The Department of Agriculture, Environment and Rural Affairs

The Marine and Fisheries Division refers to standing advice and provides a link to same.

The Water Management Unit is satisfied with the application subject to the applicant referring and adhering to standing advice, required statutory permissions being obtained, and the caveat contained within its explanatory note.

The Regulation Unit, Land and Groundwater Team submit that, on the basis of the information provided, there is no comment to make.

The Natural Environment Division is content with the proposal, with the conclusion of the Natura Impact Statement, and with the details and mitigation provided in the Construction Environmental Management Plan.

The Industrial Pollution & Radiochemical Inspectorate notes the site is nearly 3km away from the nearest site which is regulated under the Pollution Prevention and Control (Industrial Emissions) Regulations (Northern Ireland) 2013, is on the other side of Lough Foyle, and is unlikely to be affected by the proposal. It is submitted, therefore, that there is no comment to make.

RSPB Northern Ireland

RSPB recommends that the applicant consults with Birdwatch Ireland. Regarding transboundary consultation, recommended conditions are set out. These relate to vegetation clearance outside of bird breeding season, the presence of an ornithologist on the site who can stop works should disturbance to birds be detected, the management of habitat within any areas for tree felling in the vicinity of turbine locations to limit the suitability of the site for hen harrier and reduce collision, and the provision of an agreed final Post-Construction Bird Monitoring Programme.

7.5. Donal Doherty

Donal Doherty submits that he owns farmland adjacent to the proposed site which he accesses via county road L7241-2, a road which the grid connection cable is intended to follow. He states that he requires unrestricted access as he has livestock on the land needing attending. He submits that the public road will be used by construction workers, maintenance staff, etc. during the wind farm construction and that it is unsuitable for the volume of traffic that will be using it. He refers to the narrowness of the road and the inability of two cars to pass. He requests that the Board conditions the requirement to install laybys prior to construction along the road and has identified sections of the road where this is necessary. He further requests a condition of planning permission which would provide him unlimited access day or night through the wind farm site in the event county road L7241-2 is closed for any reason during the construction.

8.0 **Applicant's Response to Observations**

8.1. **Response to Transport Infrastructure Ireland**

The applicant notes that TII had no observations to make regarding the proposed development.

8.2. **Response to Inland Fisheries Ireland**

Impact of Small Streams within the Catchment

It is submitted that the discharge of contaminated surface water runoff has been fully considered in the EIAR. Reference is made to Chapter 6 of the EIAR, with mitigation measures set out in that chapter highlighted.

Oil/Fuel Storage and Vehicle Maintenance

IFI guidance is noted. Reference is made to the provisions of the proposed development relating to fuel and hydrocarbon storage and refuelling measures set out in Section 9.5.2.5 of the EIAR. The applicant commits to ensuring that no vehicle maintenance would take place within 100m of any watercourse.

Roadside Drains/Fords/Culverts/Floating Roads/Piling/Turbine Bases and Watercourses

Drainage Design

Reference is made to Sections 4.7.1, 4.7.5.7, 9.5.2.2 and Appendix 9-3 of the EIAR relating to drainage design, drainage catchments, and settlement/stilling ponds.

Fords

It is not proposed to use fords as a method of crossing watercourses.

Culverts

Only four new stream crossings and two existing stream crossing upgrades are required to facilitate the proposed infrastructure. There would be a total of 11 watercourse crossings along the grid connection, being either bridge or culvert crossings. It is proposed to upgrade existing culverts within the site where existing roads are to be upgraded/widened and to install new culverts where new roads cross artificial drainage channels. Reference is made to Section 4.7.5.11, the Schedule of Mitigation and Monitoring Proposals forming Chapter 18, the Surface Water Management Plan, and Section 9.5.2.8 of the EIAR.

Floating Roads

Reference is made to Section 4.3.2.1.2 of the EIAR, which alludes to the Peat and Spoil Management Plan and the methodology for constructing floating roads. It is

submitted that the depth of peat is only one consideration, with slope angle and shear strength also being referenced. It is stated that the construction technique to be employed is set out in the Peat and Spoil Management Plan and it is noted that typical peat depths at these locations are >2.0 metres.

Piling

Reference is made to the CEMP set out in Appendix 4-3 of the EIAR and to the construction details for both ground bearing foundations and concrete-piled foundations. The CEMP refers to the foundations for the turbines and the meteorological mast having ground bearing foundations. It also states that, depending on findings of the confirmatory ground investigations, reinforced concrete-piled foundations have been considered.

Turbine Bases and Watercourses

The applicant confirms that all turbine bases would be located a minimum of 50m from watercourses and it is submitted that this is the protection of water quality.

Roadside Embankments and Cuttings/Slope Angle/Silt Traps, Settlement Ponds and Maintenance

Erosion of Roadside Embankments and Cuttings

Reference is made to Section 4.7.5.1 of the EIAR, notably the provision of interceptor drains upgradient of work areas.

Slope Angle of Embankments and Cuttings

It is submitted that the Project Geotechnical Engineer and the Contractor will ensure that the appropriate side slopes in peat are implemented throughout the construction phase as set out in the CEMP. Reference is made to Section 4.1 and the angles of side slopes in the Peat and Spoil Management Plan. Therein, it is stated that the slope inclination will be reviewed during construction, as appropriate.

Silt Traps, Settlement Ponds and Maintenance

It is noted that check dams are proposed as part of the drainage design and reference is made to Section 4.7.5.3 of the EIAR. Noting settlement ponds are also proposed, reference is made to Section 4.7.5.7 of the EIAR. Reference is also made to Appendix 9-3 on drainage design calculations and the Surface Water Management Plan accompanying the CEMP.

Existing Drainage Channels and Cement/Concrete

Existing Drainage Channels

It is submitted that no in-stream works are proposed and no routes of any natural drainage features are to be altered. The extensive artificial drainage system of the forestry plantation is noted.

Cement and Concrete

Mitigation measures set out in the Surface Water Management Plan are repeated.

Track Rutting/Contingency Planning/Stockpiling of Peat/Construction Methodologies

Track Rutting

Section 9.5.2.1 of the EIAR is referred to relating to brash mats.

Contingency Plan

Section 3.2.2.3 of the Surface Water Management Plan is alluded to relating to reactive site drainage arrangements.

Stockpiling of Peat and Other Materials

It is stated that any stockpiling of peat or other materials, other than that placed in the repositories, alongside the road network, or in the borrow pit, would be temporary. Only the upper layer of peat is proposed to be stored locally to work areas for use in landscaping. It is noted from Section 9.5.2.1.5 of the EIAR that no stockpiling of materials is proposed to take place within the 50m buffer zone during construction.

Construction Methodologies

It is submitted that construction methodologies for various elements of the proposed development are included in the CEMP. It is stated that the CEMP will be continually improved and updated throughout the construction.

Surface Water Flow Monitoring / Mitigation

Surface Water Flow Monitoring by Remote Sensing

Reference is made to Section 4.1.2.2 of the Surface Water Management Plan and to the monitoring proposed.

Implementing Mitigation Measures

The attachment of a condition requiring implementation of mitigation measures set out in the NIS, EIAR and CEMP is welcomed.

Effects on Prevailing Downstream Hydrological Regime

Reference is made to Section 9.5.3.1 of the EIAR and to the Surface Water Management Plan. It is submitted that the construction drainage would remain during the operational phase and that the downstream hydrological regime would not alter.

Interception of Suspended Solids

The applicant refers to Section 9.5.2.2 of the EIAR, the Surface Water Management Plan, mitigation by design, and mitigation of flood risk. Reference is also made to when the cessation of works would occur due to rainfall events.

Invasive Species

It is noted that no invasive species were recorded within the EIAR site boundary. Measures to address the presence of such species as set out in the CEMP is alluded to.

8.3. Response to Development Applications Unit

1. *Identification of Roost Site for Hen Harrier*

This was an unintentional error. Steps were taken to rectify the situation.

2. *Further Information on Threatened Bird Species*

A. Introduction

- Twelve additional months of bird surveys have been undertaken at Glenard Wind Farm since submission of the planning application (See Appendix 2 (1)).
- The dominant habitat type within the Proposed Development has been, and continues to be, commercial forestry since bird surveys commenced in August 2016 until surveys ceased in September 2022.
- There was no significant change in the distribution and abundance of key ornithological receptors, such as hen harrier. However, there were noteworthy changes for three species at the wind farm site, these species were Goshawk, Merlin and White-tailed Eagle:

- Goshawk and Merlin were both recorded breeding within the wind farm site during the 2022 breeding season. These species were not recorded breeding within the wind farm site previously.
- Between October 2021 and September 2022, there has been 37 observations of White-tailed Eagle which is a marked increase from the two flights recorded previously.
- A summary of the key findings from October 2021 and September 2022 inclusive is:
 - Golden Eagle was observed on only one occasion during vantage point surveys.
 - Golden Plover was not observed during this survey period.
 - Goshawk was observed on six occasions during the vantage point surveys. The majority of observations related to a confirmed breeding territory within the wind farm site. This is a noteworthy change.
 - Hen Harrier was observed on 25 occasions during the vantage point surveys and on eight occasions during the dedicated Hen Harrier roost surveys, all of which were outside the core breeding season (April to August). Most observations were of birds hunting or commuting. Hen Harriers were observed going to roost on four occasions.
 - Merlin were observed on six occasions during the vantage point surveys, on one occasion during the breeding walkover surveys and on 11 occasions during the breeding raptor surveys. Breeding behaviour was recorded at two locations. These observations confirm the presence of a nest, however, the nest sites were not located.
 - Osprey was observed on only one occasion during the breeding raptor surveys.
 - Peregrine were observed on six occasions during the vantage point surveys.
 - Red Kite were observed on only one occasion during vantage point surveys. An individual was observed commuting adjacent to the wind farm site.

- Whooper Swan were observed on only two occasions during the vantage point surveys.
- Grey Heron were observed on four occasions during the vantage point surveys.
- Greylag Goose were observed on only one occasion during the vantage point surveys. A flock of 100 birds was observed commuting in April along the margins of the wind farm site.
- Kestrel were observed on 24 occasions during the vantage point surveys, on six occasions during the breeding walkover surveys and on 11 occasions during the breeding raptor surveys.
- Snipe were observed on 21 occasions during the breeding walkover surveys.
- White-tailed Eagle were observed on 20 occasions during the vantage point surveys between January and August 2022, on three occasions during the breeding walkover surveys and on 14 occasions during the breeding raptor surveys.
- Buzzard were observed on 69 occasions during vantage point surveys, 16 occasions during the breeding walkover surveys and 33 occasions during the breeding raptor surveys.
- Sparrowhawk were observed on 21 occasions during the vantage point surveys, on five occasions during the breeding walkover surveys and on six occasions during the breeding raptor surveys.
- Black-headed Gull, Common Gull, Herring Gull, Mallard, Curlew, and Woodcock were not observed during this survey period.

B. Assessment of Effects and Mitigation Measures

The applicant's assessment of effects includes:

Goshawk

This species was recorded on six occasions during surveys between October 2021 and September 2022. The majority of these observations related to a breeding territory within the wind farm site. A Goshawk nest was recorded within the wind farm

site. The identified territory overlaps with the proposed development infrastructure (including turbines). The species frequents large blocks of mature forest and nests in trees of on average above 20m. The 2022 Goshawk territory was located within an area dominated by mature forestry, with projected felling years between 2023 and 2046. Given the abundance of suitable nesting habitat (mature commercial forestry) for this species in the wider area surrounding the wind farm site, it is likely that this pair has alternative nesting sites.

Construction Phase

Habitat Loss

- The construction of the wind farm site will not result in the (physical) loss of a significant amount of foraging and breeding habitat given the development footprint is small (i.e., 27.88ha/3.36% of wind farm site) relative to the total area within the wind farm site.
- Where disturbance of nest sites has been observed early in the season, the birds may move up to 2.5km to an alternative nest site, with some pairs having up to four different nesting areas within their nesting range (Petty & Anderson, 1996). Given the abundance of suitable nesting and foraging habitat (commercial forestry) in the wider area surrounding the wind farm site, it is likely that this pair has alternative nesting sites. Furthermore, extensive areas of suitable foraging and breeding habitat will remain post-construction.
- No significant (physical) habitat loss is predicted.

Disturbance

- The disturbance associated with construction works will likely result in this pair of Goshawk not breeding in its current territory within the wind farm site.
- A significant effect would only result if there was no alternative similar suitable habitat to relocate to and/or the species was dependent on a single nest site. However, in the present case, this is not the situation. Commercial forestry accounts for c. 4,642,2 ha of the uplands in the Inishowen Peninsula. Of this

total, some 4,243.9ha falls outside of a 500m radius of existing/permitted turbines and is therefore available to Goshawk for foraging and nesting.

- No significant displacement effects are predicted at the county, national or international scale.

Operational Phase

Habitat Loss

- No effects are predicted as no additional infrastructure is proposed to be built during the operational phase.

Displacement and Barrier Effect

- Displacement from turbines by Goshawk is little discussed in the literature, however, it is assumed for the purposes of the assessment that Goshawk show avoidance to a distance of 500m from turbines as with other raptors.
- The species is likely to be displaced from the 2022 nest location and the foraging habitat within 500m of turbines. A significant displacement effect would only result if there was no alternative similar suitable habitat to relocate to and/or the species was dependent on a single nest site. However, in the present case, this is not the situation.
- Within the proposed development area there is 555.2ha of commercial forestry within 500m of the proposed turbine layout. The loss of c. 13% of the suitable breeding and foraging habitat is not considered significant.
- This species has been observed to be capable of relocating in response to disturbance, with some Goshawk pairs having up to four different nesting areas within their nesting range.
- No significant displacement effects are predicted at the county, national or international scale.

Collision Risk

- The collision risk has been calculated at a rate of 0.02 collisions per year, or one bird every c.41 years. This is a prediction of no collisions during the lifetime of the wind farm. The predicted collision risk is insignificant, given no collisions are predicted to occur during the lifetime of the wind farm.

Decommissioning Phase

Habitat Loss

- No effects are predicted as no additional infrastructure is proposed to be built during the decommissioning phase.

Disturbance Displacement

- As above for the construction phase.

Significance of Residual Effects

- No significant effects are predicted at the county, national or international scale.

Merlin

Merlin were recorded on 28 occasions during surveys between September 2016 and September 2021. There were 18 observations during surveys between October 2021 and September 2022 (both during breeding and non-breeding season). This species was occasionally observed within, or partially within, 500m of the proposed turbine layout. In 2022, this species bred within the wind farm site, and successfully fledged four chicks. This territory was located approximately 600m from the proposed turbine layout. A second nest site was located in 2022, in this instance 2.6km from the wind farm site.

Construction Phase

Habitat Loss

- The 2022 Merlin territory within the wind farm site was at the margin of the commercial forestry plantation and was located approximately 600m from the nearest proposed turbine. No other infrastructure is proposed in this location. The construction of the wind farm site will not result in the (physical) loss of a significant amount of foraging and breeding habitat given the development footprint is small (i.e. 27.88ha/3.36% of wind farm site) relative to the total area within the wind farm site. It is noted that most of this habitat (commercial forestry) is not suitable for foraging Merlin.
- Significant effects are not anticipated given that the proposed turbines are all located within a habitat of low ecological value (forestry), and substantial areas of suitable foraging and breeding habitat will remain post-construction. Furthermore, suitable habitat is abundant in the surrounding area.
- No significant effects are predicted.

Disturbance

- This species was recorded breeding within the wind farm site, approximately 600m from the nearest proposed turbine. The majority of observations of Merlin were recorded more than 500m from the proposed turbine layout. Goodship and Furness (2022) recommend a buffer zone of 300-500m around a known Merlin nest to avoid disturbance by human activity (i.e. activities similar to those associated with the construction of the wind farm site).
- The construction of the construction compound and access road to the construction compound is likely to cause disturbance to this nesting location as they are located within 390 m and 230 m of the nest, respectively. However, once these two elements of the project are constructed, significant impacts are not anticipated.

- There was a breeding territory for Merlin identified approximately 2.6km from the wind farm site. Due to the significant separation distance between this territory and the wind farm site, no disturbance displacement is anticipated.
- Significant effects are not anticipated for the majority of the construction works, particularly given the forestry where these works are proposed is not favoured by Merlin. Moreover, suitable habitat is abundant in the surrounding area.
- No significant disturbance effects are predicted for the majority of the construction phase of the wind farm site. Moderate magnitude disturbance effects (requiring mitigation) are predicted for breeding Merlin regarding the construction of the entrance road and the construction compound.

Operational Phase

Habitat Loss

- No effects are predicted as no additional infrastructure is proposed to be built during the operational phase.

Displacement and Barrier Effect

- This species was recorded breeding within the wind farm site, approximately 600m from the nearest proposed turbine. Given that the proposed turbines are located within commercial forestry, and given the habitat preferences of Merlin, significant impacts are not anticipated on breeding Merlin given that this species is unlikely to be utilising the habitats surrounding the turbines for hunting or breeding.
- Significant effects are not predicted particularly given the low levels of activity recorded within the commercial forestry of the wind farm site, where the proposed turbines are located. Furthermore, suitable habitat is abundant in the surrounding area.
- No significant displacement effects are predicted.

Collision

- The collision risk has been calculated at a rate of 0.008 collisions per year, or one bird every c.198 years. The predicted collision risk is insignificant, given no collisions are predicted to occur during the lifetime of the wind farm. No significant effects are predicted.

Decommissioning Phase

Habitat Loss

- No effects are predicted as no additional infrastructure is proposed to be built during the decommissioning phase.

Disturbance Displacement

- As above for the construction phase.

Mitigation measures

Additional mitigation measures are proposed for the construction phase. A pre-commencement survey will be required to confirm the presence/absence of the nest and its location. A vantage point survey will be undertaken on three separate days, with one visit in early, mid and late April. The vantage point will be sufficiently distant from the forestry to avoid disturbance and include a view shed of the 2022 nest location and (following the treeline) 500m on either side of the nest. Following the recommendations of Hardey (2013) to confirm occupancy the vantage point survey will be 4-6 hours in duration and undertaken in the morning before 12 midday or after 4pm.

If the nest location is active at pre-commencement survey then seasonal constraints will be applied during the construction phase and all construction works (i.e., the construction compound and access road) within 500m of the identified Merlin nest

will be undertaken outside the breeding season. The period when breeding Merlin are sensitive to disturbance runs from the 1st of March to the 31st of August.

Significance of residual effects

- Following mitigation, no significant residual effects are predicted to occur at the county, national or international scale.

White-tailed Eagle

White-tailed Eagle were observed on two occasions during surveys from September 2016 to September 2019 and January to September 2021. Between October 2021 to September 2022, there has been a marked increase in occurrence, with 37 observations during this period. This species favours wetland habitats for breeding and foraging, such as the coastline surrounding the Inishowen Peninsula. It is considered likely that the eagles recorded at the wind farm site are spending the majority of their time in coastal/lacustrine habitats away from the wind farm site. The White-tailed Eagles recorded at the proposed wind farm site are juvenile birds. The 37 observations between October 2021 and September 2022, all occurred in the months of 2022: January, February, April, May, June, July and August. The observations likely relate to the same three individuals. Throughout the period between September 2016 and September 2022, there was no evidence of breeding or roosting activity recorded within a 2 km radius of the site. Furthermore, there is no known breeding territory in the Inishowen Peninsula. This species readily scavenges on dead animal carcasses (e.g. sheep), which may be the attractant to the area surrounding the proposed wind farm.

Construction Phase

Habitat Loss

- There was no evidence of breeding or roosting White-tailed Eagle within the wind farm site, or up to 2 km from the wind farm during the bird surveys from

September 2016 and September 2022 surveys. Significant effects are not predicted given the majority of the habitats within the wind farm site are sub-optimal (i.e. commercial forestry) for foraging White-tailed Eagle. Furthermore, commercial forestry is not unique to the wind farm site or rare in the wider surroundings and there are substantial areas of more favourable open habitats in the wider surroundings of the proposed development.

- No significant residual effects are anticipated.

Disturbance

- Significant effects are not predicted given the majority of the habitats within the wind farm site are sub-optimal (i.e. commercial forestry). Furthermore, there are substantial areas of more favourable open habitats in the wider surroundings of the proposed development.
- No significant residual effects are anticipated.

Operational Phase

Habitat Loss

- No effects are predicted as no additional infrastructure is proposed to be built during the operational phase.

Displacement and Barrier Effect

- Significant effects are not anticipated particularly given the habitats within the wind farm site are sub-optimal (i.e. commercial forestry) for foraging.

Collision

- Before 2022, this species was very rarely encountered locally. The White-tailed Eagles that were recorded during 2022 were young birds. As juvenile White-tailed Eagles disperse widely before establishing a territory (Cramp and Simmons, 1980), it is not certain that their recent local occurrence will continue.
- The collision risk, in the absence of mitigation, has been calculated at a rate of one potential bird collision every c. 1.9 years, which is due to the levels of flight activity recorded during the most recent 2022 surveys.

Mitigation Measures

A comprehensive programme of monitoring is also proposed. As raptors may congregate at wind farms to prey on carrion, the removal of prey attractants can prove a very effective means of keeping raptors away from turbines. The removal of fallen animal carcasses is a widely accepted and practical means of reducing the potential attractiveness of a wind farm site for White-tailed Eagles. Furthermore, the applicant would welcome the opportunity for engagement and consultation with the National Park and Wildlife Service regarding the proposed implementation of the mitigation and monitoring protocols. To reduce the amount of White-tailed Eagle flight activity at the proposed wind farm and hence reduce the collision risk, a carcass removal programme will be implemented.

Decommissioning Phase

Habitat Loss

- No effects are predicted as no additional infrastructure is proposed to be built during the decommissioning phase.

Disturbance Displacement

- As above for the construction phase.

Significance of Residual Effects

The removal of fallen animals / carcasses from the wind farm is predicted to reduce the significance of the effect on White-tailed Eagle that may continue to frequent the area. If the species were to remain in the area, there is potential for a residual effect of moderate significance on White-tailed Eagle.

Post-Construction Bird Monitoring

As outlined in EIAR, monitoring was proposed to be undertaken in Year 1, 2, 3, 5, 10 and 15 of the life-time of the wind farm. As collision mitigation is required, there is an associated requirement for an increase in the frequency of surveys from what was previously proposed in EIAR. The monitoring regime will be undertaken every year. The requirement to continue this higher frequency of surveys will be evaluated annually and reduced as appropriate in line with the success of the mitigation employed. Any decision to reduce the frequency of surveys would be agreed upon in advance with NPWS.

Monitoring: Collision Searches

As collision mitigation is required, there is an associated requirement for an increase in the frequency of bird collision searches from what was previously proposed in the EIAR. Monitoring would be undertaken twice per month at the wind farm site. This additional monitoring will ensure that carcasses are not overlooked in the very unlikely event they occur. The requirement to continue this higher frequency of surveys will be evaluated annually and reduced as appropriate in line with the success of the mitigation employed. Any decision to reduce the frequency of surveys will be agreed upon in advance with NPWS.

Consultation

The applicant will consult with the National Parks and Wildlife Service in respect of the draft mitigation and monitoring plan before it is agreed with the planning authority. The applicant would welcome the opportunity for engagement and consultation with the National Parks and Wildlife Service regarding the proposed implementation of the mitigation and monitoring protocols. The plan will be annually reviewed to confirm the efficacy and implementation of all relevant mitigation measures and commitments identified and the monitoring reports will be submitted to the NPWS in addition to the planning authority.

C. Cumulative Impact Assessment

There were three key ornithological receptors identified at the proposed development requiring an updated impact assessment: Goshawk, Merlin and White-tailed Eagle due to the change of occurrence of these species at the proposed wind farm site. Construction disturbance is a short-term impact and is not likely to give rise to significant cumulative effects. The collision risk for White-tailed Eagle is predicted to be Low and Long-term Slight post-mitigation. For the purposes of the cumulative assessment, a relevant local scale for the cumulative assessment is considered to be the Inishowen Peninsula.

Goshawk

Within the Inishowen Peninsula, the project with the potential to give rise to cumulative habitat loss and displacement effects is wind farm developments and forestry. There is 41,303.7ha of upland habitat within the Inishowen Peninsula. Within these uplands, there are 113 number of existing/permitted turbines. The area occupied by these turbines and their 500m radii is 2,516.3ha. Within the Inishowen Peninsula uplands, there are c. 4,642.2ha of commercial forestry, which includes the forestry within the proposed wind farm site. Of this total, some 4,243.9ha falls outside of a 500m radius of existing/permitted turbines. The remaining c. 4,243.9ha continues to constitute a significant amount of forestry habitat.

The proposed development is sited predominantly in a commercial conifer plantation, a habitat type predominantly utilised for foraging and nesting. The construction disturbance and disturbance associated with operational turbines will result in a measurable reduction in the breeding density of Goshawk onsite and a reduction in the amount of foraging habitat within 500m of turbines. Similar displacement impacts are predicted on other afforested wind farm sites locally. However, commercial forestry is not a rare habitat type locally. Therefore, significant cumulative impacts are not predicted. For Goshawk no collisions are predicted to occur during the lifetime of the proposed wind farm. No significant contribution to cumulative collision risk is predicted.

Merlin

Within the Inishowen Peninsula, the projects with the potential to give rise to cumulative habitat loss and displacement effects are wind farms and commercial forestry. There is 41,303.7ha of upland habitat within the Inishowen Peninsula. Within these uplands, there are 113 number of existing/permitted turbines. The area occupied by these turbines and their 500m radii is 2,516.3ha. Within the Inishowen Peninsula uplands, there are c. 4,642.2ha of commercial forestry, which includes the forestry within the proposed wind farm site. Of this total, some 4,243.9ha falls outside of a 500m radius of existing/permitted turbines. The total area occupied by existing/permitted turbines and forestry is 6,760.2ha or 16.4% of the total area (41,323.7ha) within the Inishowen Peninsula uplands.

Within the proposed development area, there is 555.2ha within 500m of turbines, 482.1ha of which is commercial forestry. As this 482.1ha has already been accounted for within the 4243.9ha of forestry discussed above, the remaining 73.1ha is a 0.2% loss of the remaining habitat (34,543.5ha) within the Inishowen Peninsula uplands. This is not a significant (direct/indirect) loss of habitat for breeding Merlin. Furthermore, the remaining c. 34,500ha continues to constitute a significant amount of upland habitat.

Several of the wind farms located within a c. 5km radius of the proposed development are located in open habitats (wet grassland or peatland), potentially

suitable for this species e.g. Crockahenny and Flughland wind farms. However, the proposed development is sited predominantly in a commercial conifer plantation, a habitat type of limited ecological value to this species.

It is noted that there is potential for construction disturbance and operational displacement of this species from open areas around the margins of the proposed development. However, these areas are small relative to the abundance of open habitat present in the wider surroundings. No significant contribution to cumulative habitat loss is predicted. In addition, following the implementation of the proposed mitigation measures for nesting Merlin, significant effects are not predicted at the proposed development.

For Merlin no collisions are predicted to occur during the lifetime of the proposed wind farm. No significant contribution to cumulative collision risk is predicted.

No significant effects on this species were identified for any of the local wind farms. Furthermore, no significant effects were reported for any of the wind farms located within a 20km radius of the wind farm site. No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss, displacement or collision mortality.

White-Tailed Eagle

Within the Inishowen Peninsula, the projects with the potential to give rise to cumulative habitat loss and displacement effects are wind farms and commercial forestry. There is 41,303.7ha of upland habitat within the Inishowen Peninsula. Within these uplands, there are 113 number of existing/permited turbines. The area occupied by these turbines and their 500m radii is 2,516.3ha. Within the Inishowen Peninsula uplands, there are c. 4,642.2ha of commercial forestry, which includes the forestry within the proposed wind farm site. Of this total, some 4,243.9ha falls outside of a 500m radius of existing/permited turbines. The total area occupied by existing/permited turbines and forestry is 6,760.2ha or 16.4% of the total area (41,323.7ha) within the Inishowen Peninsula uplands. There is therefore 34,543.5ha

of remaining habitat that could be utilised by this species within the Inishowen Peninsula uplands.

Within the proposed development area, there is 555.2ha within 500m of turbines, 482.1ha of which is commercial forestry. As this 482.1ha has already been accounted for within the 4243.9ha of forestry discussed above, the remaining 73.1ha is a 0.2% loss of the remaining habitat (34,543.5ha) within the Inishowen Peninsula uplands. This is not a significant (direct/indirect) loss of habitat. Furthermore, the remaining c. 34,500ha continues to constitute a significant amount of upland habitat.

Several of the wind farms located within a c. 5km radius of the proposed development are located in open habitats (wet grassland or peatland), potentially suitable for this species e.g. Crockahenny and Flugland wind farms. However, the proposed development is sited predominantly in a commercial conifer plantation, a habitat type of limited ecological value to this species.

There is potential for construction disturbance and operational displacement of this species from the proposed development. However, there is an abundance of more favourable habitats in the wider surroundings (i.e. the nearby coastline). No significant contribution to cumulative habitat loss is predicted.

The removal of fallen animals / carcasses from the wind farm is predicted to reduce the significance of the effect on White-tailed Eagle that may continue to frequent the area. It is considered that if the species were to remain in the area, and despite the implementation of mitigation, there is potential for a residual effect of moderate significance on White-tailed Eagle.

No residual additive, antagonistic or synergistic effects have been identified with regard to habitat loss or displacement.

3. Risks to Hen Harrier, Golden Eagle and Merlin

Hen Harrier

Hen Harrier continues to utilise the known roost site identified adjacent to the wind farm site during the winter season. The impacts on this roost site have been fully considered and assessed in Section 7.8.2.3 of the EIAR as lodged. The roost location remained in the same area of bog as outlined in the EIAR during the 2021/22 winter season. Therefore, there is no significant change to the Hen Harrier activity observed and the impact assessment as outlined in the EIAR is further corroborated.

There was one observation of a Hen Harrier alarm calling adjacent to the wind farm site in 2018. Despite a comprehensive suite of surveys conducted at the wind farm site in 2018 and subsequent breeding seasons (2019, 2020, 2021 and 2022), no further evidence of breeding Hen Harrier has been observed at, or within 2km of, the wind farm site. It is therefore highly unlikely that Hen Harrier bred in 2018 or any subsequent breeding season on, or within 2km of, the wind farm site. No significant breeding season effects are predicted.

Golden Eagle

Golden Eagle were fully considered and assessed for impacts with regard to the wind farm site in Section 7.8.2.1 of the EIAR. Effects no greater than a very low effect significance and long-term imperceptible negative effect were predicted for Golden Eagle. Observations of this species between October 2021 and September 2022 further corroborate the information presented in the EIAR. No significant effects are predicted.

Merlin

Merlin have been subject to an updated impact assessment, as outlined above, given the change of distribution of breeding Merlin during the 2022 breeding season.

Residual effects no greater than low effect significance and long-term slight negative effect were predicted for Merlin, post mitigation.

4. Recording Bird Carcass Finds

- No significant collision risk is predicted for either Golden Eagle or Hen Harrier. As no significant collision risk effects requiring mitigation were identified for either Hen Harrier or Golden Eagle no mitigation is proposed.
- A comprehensive programme of bird carcass searches is proposed. Monitoring would be undertaken every year, twice per month at the wind farm site. This monitoring would ensure that carcasses are not overlooked in the very unlikely event that there are collisions.
- In the unlikely event that carcass finds are recorded for Golden Eagle or Hen Harrier an adaptive management approach will be undertaken as stated in EIAR Appendix 7-8.
- The mitigation measure will be species-specific and/or targeted to the unique ecology of the species or species group involved.
- A comprehensive programme of fallen animal carcass removal will be implemented at the proposed wind farm. This measure was proposed to mitigate White-tailed Eagle collision risk and will have the additional ancillary benefit of removing potential attractants to the wind farm for Golden Eagle also.
- In the highly unlikely event of a single Hen Harrier carcass is recorded, the implementation of a strategy informed by the NatureScot document “Wind farm proposals on afforested sites – advice on reducing suitability for hen harrier, merlin and short-eared owl” (2016) will be applied. This document outlines a strategy to reduce the attractiveness of the areas around the turbines for Hen Harrier. The measures will include the management of vegetation height within 500m of turbines and the management of surrounding forestry.

8.4. **Response to Third Party Observation**

It is submitted:

- Other than the construction plant and vehicles required for the construction of the grid connection infrastructure, the L7241-2 and site entrance would only be used for the access and egress of a small number of staff cars and Light Goods Vehicles to the main wind farm site.
- There are no works proposed beyond the site access junction and the final section of road leading to the Observer's lands would not be impacted.
- All HGVs, abnormal load vehicles, and the majority of staff cars/LGVs would access the site via the main site entrance.
- The Construction Methodology document in Appendix 4-5 of the EIAR and its traffic management measures are noted.
- Access for local residents would be maintained along the L7241-2 during the construction of the grid connection.
- The applicant is committed to full engagement with local residents/landowners and every effort would be made to limit inconvenience to local road users.
- The applicant commits to implementing the necessary measures to ensure that all landowners have continuous access to their lands during the construction phase.
- Locals may incur some short-term delays due to construction but would not be precluded from accessing their land.

8.5. **Response to Donegal County Council**

Impact on Future Road Maintenance by Cabling

- The integrity of the road as a result of the installation of the cable will be maintained so that normal vehicle traffic and HGV traffic can continue to use the public road network.

- Prior to work commencing, the contractor shall inform the Roads Authority and shall agree the appropriate remedial measures such as reinstatement.
- Best practice procedures around culvert/drainage crossings will be to install the cable ducting beneath all drainage, culverts and services.
- Stone culvert or any legacy infrastructure is a relatively straight forward process in terms of replacement.

Cabling Construction and Destabilising Road Infrastructure

- The construction works associated with the installation of the HV cabling along local road networks is well established and accepted.
- The construction methodology set out in Appendix 4-5 of the EIAR will ensure that no destabilisation takes place.
- Prior to work commencing, a road opening licence will be applied for.
- Some temporary road closures will be required over a period of 25 days. Further closures will be required to allow the existing bridge deck crossing of the Owenkillow River at Tullydish Upper to be replaced. Potential local diversions are set out in the EIAR. Traffic management systems shall be employed to allow access for local residents only.
- The applicant is committed to road surface and boundary reinstatement to pre-development condition in agreement with the local authority and to a pre- and post-condition survey. If a bond is requested the applicant is willing to accept a condition attached with a grant of permission.

Cabling – An Obstacle to Local Development

- Prior to commencement of any excavation works, it is the responsibility of the developer to locate all existing services and to safeguard same during construction.
- The grid consultant found there to be minimal buried utilities in the vicinity of the grid connection route and established that there will be sufficient space available within the public road network.

- The project grid designers are not aware of instances where HV cabling has posed an issue to local authorities to carry out resurfacing upgrades or maintenance of existing services buried in the road corridor.

Responsibility for Costs of Diversions or Outages arising from Cabling

- There are minimal buried utilities in the vicinity of the grid connection route. There will be sufficient space available within the road curtilage after the completion of works for additional services to be installed should this be required.
- The HAS *Code of Practice for Avoiding Danger from Buried Services* sets out clearly what setback distances are required to facilitate the co-existence of local services within the public road network. The proposed grid connection cabling will adhere to this standard.

Constraints from Cabling in Narrow Roads

- The cable infrastructure will be installed in line with best practice and per EirGrid/ESB Networks specifications. There are no constraints which have in the past, or will in the future, limit the ability of other utilities to be placed in the same road corridor.

Attaching a Condition relating to Roads Infrastructure

- The applicant is fully committed to engagement with the Roads Authority in advance of construction. Pre and post condition surveys are also committed to. The developer will adhere to road licencing charges. Should it be the case that the Roads Section request an associated bond, the applicant is willing to accept a condition attached to any grant of planning permission issued.

Policy Provisions

The following is submitted:

- In line with the Ministerial Direction received under Section 31 of the Planning and Development Act 2000, as amended, Donegal County Council have duly varied their County Development Plan 2018- 2024 to amend Map 8.2.1 (wind energy). The entirety of the proposed wind farm site at Glenard was previously located in an area deemed 'Open to Consideration' for wind energy and is now located partially in an area deemed 'Open to Consideration' and partially deemed 'Not Normally Permissible.'
- The variation to the wind energy policy framework of the Plan is based on sieve analysis mapping undertaken by the Council with regards environmental sensitivities across the Plan area. This methodology was used as a basis for the varied Wind Energy Map (Map 8.2.1) of the Plan. One of the spatial datasets used to inform the sieve analysis and indeed the varied Map 8.2.1 is the Geological Society of Ireland's (GSI) landslide susceptibility mapping.
- It is contended that the information provided by the GSI, used to directly inform the new wind energy map for the county, cannot be used in isolation as a determining factor when considering a proposed wind farm development such as is the case here. Significant technical and site-specific site investigation has taken place across the proposed development site to inform the final layout and ensure the development will be safely and securely constructed. It is noted that no major land use changes have been recorded across the site by Corine mapping (2018). The Donegal County Council response to the application in no way highlights any potential concern with regards landslide susceptibility in any area of the application site.
- In relation to landslide susceptibility at the application site, geotechnical ground investigations and a peat stability assessment were undertaken by Fehily Timoney and Company (FTC). The combined geological and hydrogeological dataset collated by Hydro Environmental Services (HES), MKO and FTC has informed the design and layout of the project and has been used in the preparation of the Land, Soils and Geology chapter (Chapter

8) of the EIAR. Intrusive site investigations and a peat stability assessment were undertaken including mapping the distribution and depth of blanket peat at the wind farm site along with assessing the mineral subsoil/bedrock conditions beneath the peat at key development locations which included all proposed turbine locations (including Turbine no.2). This data was used to inform the final layout design.

- It has been demonstrated that the project as a whole will not have any significant adverse impacts on lands, soils and geology and the detailed geotechnical assessment of the site shows that the proposed Glenard windfarm site has an acceptable margin of safety and is considered to be at Low Risk of peat failure. As such, it is contended that there is no landslide susceptibility risk existing at the site which directly correlates to the information provided by the GSI landslide susceptibility mapping, as then used to inform the wind energy map of the Donegal County Development Plan 2018-2024 (as varied).
- There is no rationale for the alteration of the wind energy zoning to 'Not Normally Permissible' at the location of Turbine no. 2.
- In summary:
 - An Bord Pleanála as the competent authority in this case is not strictly bound by the Development Plan policy in place;
 - The Development Plan policy is not absolute insofar as areas deemed 'Not Normally Permissible' implies permissible exceptions do exist; and
 - The detailed technical assessments carried out across the site demonstrate that the proposed development would not have an adverse impact on soils or result in a landslide risk, which the Plan policy was designed to protect against.

Landscape Scenic Amenity Value of the Site

It is noted that the planning authority considers the amenity value of the landscape allows consideration of the proposed development.

Potential Impact on EU Designated Sites

It is noted that the planning authority considers the proposals would not have a significant adverse impact on the qualifying interests of Natura 2000 sites subject to implementation of the mitigation measures set out in the NIS.

Borrow Pit, Peat and Spoil Management

It is noted that no concerns were raised about the approach to the single borrow pit and the peat and spoil management plan.

Roads

Reference is made to the response to the roads issues above. It is noted that there is no objection to the provision of the two link roads along the haulage route.

Shadow Flicker

It is noted that the planning authority accepted the mitigation measures and raise no objection in relation to shadow flicker.

Hydrology and Hydrogeology

Reference is made to Chapter 9 of the EIAR and it is submitted that the Board has before it comprehensive information to enable it to fully consider the impact of the proposed development on the existing drainage of the site. Watercourse crossings associated with the grid connection are noted and mitigation measures set out in Section 9.5 of the EIAR are noted.

Peat Instability and Failure

Potential environmental and ecological impact of works associated with the grid connection underground cabling works

- Works in respect of the proposed grid connection are fully assessed within the EIAR at Chapter 6.
- The Environmental Clerk of Works will act as the regulatory interface on environmental matters by reporting to and liaising with Donegal County Council and other statutory bodies as required. The Project Ecologist will report to the ECoW and is responsible for the protection of sensitive habitats and species encountered during the construction phase of the proposed renewable energy development. The Project Ecologist will not be full time on site but will visit the site at least once a month during construction. A Project Hydrologist is responsible for the inspection and review of drainage and water quality aspects associated with the construction phase and will report to the ECoW.

Undergrounding of the grid connection within the confines of the existing road infrastructure

- Referred to above.

Ensure that all existing onsite drainage remains in-situ to relieve any build-up of water pressure in the peat to avoid the peat becoming buoyant

- Chapter 9: Hydrology and Hydrogeology contains full details of the assessment of the potential likely and significant effects of the Proposed Development on water aspects of the receiving environment. Geotechnical ground investigations and a peat stability assessment were also undertaken.
- Any introduced drainage works will mimic the existing drainage regime.
- While the risk of peat failure at this site is Low, it is not anticipated that a peat slide will occur. As a contingency, a check barrage procedure has been included in the Peat and Spoil Management Plan.

Adequate security bonds and appropriate development contributions

- In principle, the applicant is willing to provide necessary bonds/contributions.

8.6. Response to Irish Aviation Authority

The applicant notes that the City of Derry Airport provided a letter stating it had no objection to the proposal and referred to Sections 14.2.3.3 and 14.2.4.3.2 of the EIAR. The applicant has no objection to the planning condition proposed by IAA.

9.0 Observer Responses to the Applicant's Response

9.1. Donegal County Council

The Council submits that, with regard to the laying of the underground cable, it is accepted this aspect will be dealt with by appropriate road opening arrangements. It asks the Board to ensure that a pre- and post-construction roads condition survey and accompanying photographic survey of the road network is a condition of permission should it be granted. It also requests that it is a condition of any permission that a Construction Traffic Management Plan be submitted for the written agreement of the planning authority, taking cognisance of the impact on local residents and ensuring management of access to their properties.

9.2. Transport Infrastructure Ireland

TII submits that its position remains the same as that of its initial submission.

9.3. Donal Doherty

The observer submits that it appears that the developers have addressed his concerns and that, for the sake of clarity, it is his understanding that the developers

are saying the L7241-2 will remain open at all times so that he can have full access to his farm day or night.

9.4. Northern Ireland Planning Service

A number of responses were received in March and April, 2024. These are referred to under 'Transboundary Effects' in my Environmental Impact Assessment. Suffice to indicate that there were no particular concerns raised following the receipt of the applicant's response to the submissions received.

10.0 Planning Assessment

10.1. Introduction

10.1.1 This part of my assessment will consider a number of issues considered to be principal planning matters associated with the proposed development. My assessments under the headings of 'Environmental Impact Assessment' and 'Appropriate Assessment' will follow and will also seek to address some of the key environmental issues relating to the proposed development.

10.2. Need for the Proposed Development

10.2.1 Section 1.5 of the applicant's EIAR sets out details on the need for the proposed development. This refers to the contribution to Ireland's 2030 renewable energy target and climate action commitments, energy security and reducing import dependency, meeting EU renewable energy targets, reducing carbon emissions and other greenhouse gases with benefits to air quality and human health, and the economic benefits derived from displacing fossil fuel imports, job creation, commercial rate payments, Community Benefit Schemes, etc. Reference is also made to the recreational benefits from the development of an amenity area. I further note that Chapter 2 addresses the compatibility of the proposal with international, national and regional renewable energy policy.

10.2.2 I submit to the Board that, setting aside consideration of the environmental impacts arising from the selected site itself, the principle of the development, i.e. the high-level need for renewable energy projects of the type proposed, is well-founded. The duties and responsibilities in meeting Ireland's commitments to reduce greenhouse gases through projects such as onshore wind farm development is accepted. The need for developments of the nature proposed to meet these commitments is, therefore, also accepted.

10.3. **Compatibility with Renewable Energy Policy**

10.3.1 I note that wind farm development in principle would be compatible with a wide range of international, EU, national, regional and local policies relating to the reduction in greenhouse gas emissions, the promotion of renewable energy, and the role of onshore wind development. This includes the following:

- The Kyoto Protocol, an international agreement to which Ireland is a party to, which seeks significant reductions in total greenhouse gas emissions to no more than 13% above 1990 levels;
- The Paris Agreement, which provides for a limitation of the global average temperature rise to well below 2 degrees Celsius above pre-industrial levels and to limit the increase to 1.5 degrees Celsius;
- The Renewable Energy Directive, which requires EU Member States to adopt a national renewable energy action plan (NREAP) and therein to set out national targets for the share of energy from renewable resources;
- The Climate Action and Low Carbon Development Act 2015, as amended, which provides for the establishment of a national framework with the aim of achieving a low carbon, climate resilient and environmentally sustainable economy by 2050;
- The National Mitigation Plan arising from the above Act, which aims to provide the statutory basis for the transition to a low carbon, climate resilient and environmentally sustainable economy;

- The provisions of the Climate Action Plan 2023 which implements the carbon budgets and sectoral emissions ceilings, sets out a roadmap for taking decisive action to halve the State's emissions by 2030 and reach net zero no later than 2050, and recognises that onshore wind will continue to play a vital role in increasing the decarbonisation of the electricity sector particularly over the next five years, along with solar energy;
- The National Renewable Energy Action Plan, following on from the Renewable Energy Directive, which sets out the national targets for the share of energy from renewable resources to be consumed in transport, electricity, and heating and cooling;
- The National Planning Framework, which promotes renewable generation and generation at appropriate locations to meet national objectives towards achieving a low carbon economy by 2050 (National Policy Objective 55);
- The Northern & Western Regional Assembly - Regional Spatial and Economic Strategy 2020-2032, whose policies include positioning the region to avail of the emerging global market in renewable energy by stimulating the development and deployment of the most advantageous renewable energy systems and by encouraging the development of the transmission and distribution grids to facilitate the development of renewable energy projects (RPO 4.17) and supporting the development of secure, reliable and safe supplies of renewable energy (RPO 4.18); and
- Donegal County Development Plan, whose objectives includes developing sustainably a diverse renewable energy portfolio to meet demands and capitalise on the county's competitive locational advantage.

10.3.2 It is reasonable to conclude from the provisions and objectives of the above that the development of a wind farm would be consistent with the aims of reducing greenhouse gas emissions, improving renewable energy production, and contributing to the aim of achieving a low carbon economy. While I acknowledge that there is clear policy emerging on development of offshore wind farms, it remains the case that the development of onshore wind farms is considered to be an integral part

of the delivery of renewable energy in the pursuit of decarbonisation of the electricity generation sector.

10.4. **The Management of Waste Materials**

10.4.1 It is estimated by the applicant that the quantity of peat requiring management on this site arising from the construction of the proposal would be 415,600m³. The quantity of other spoil requiring management is estimated to be 72,000m³. This gives a total of 487,600m³. This is an enormous volume of material requiring handling, storage and management. It is noted that the applicant proposes to dispose of this material in the worked out borrow pit which would be located on the side of a hill where ground elevations are between 260m and 280m OD and in a repository, both of which would be in a peat-dominated, upland area.

10.4.2 As rock is being extracted from the borrow pit, upstands of rock are proposed to be left in place, depending on the type of rock, to act as intermediate retaining buttresses. Where this is not achievable, stone buttresses are to be constructed within the borrow pit. In my opinion, it is unacceptable that the applicant does not know at this stage how a primary waste repository for this proposed development is intended to be finally constructed. Furthermore, it appears that the applicant is somewhat unsure about the type of rock intended to be extracted at this borrow pit location. One could not reasonably be assured that the handling, management and storage of this waste material will be carried out in a safe manner and will be sustainable for the lifetime of this wind farm at this upland location. I draw the attention of the Board to Figure 7.1 of Appendix 4-2 of the EIAR clearly showing the sloping nature of the location of the borrow pit location, the deep excavation proposed, and the high buttressing proposed to contain the vast volumes of waste materials which would be primarily made up of peat. A rock buttress downslope of the borrow pit is proposed to be constructed to retain the infill peat. This would be to a height of up to 8 metres above existing ground level. These lands slope in a north / north-westerly direction towards watercourses within the site which are a short distance from the proposed borrow pit location (see Drawing No. 190114 – 16). This borrow pit is proposed to store 400,000m³ of peat and other spoil material on this

hillside close to watercourses. I repeat that this is a vast volume of waste material, primarily peat. The applicant remains unsure about how this major waste repository is proposed to be constructed. This cannot reasonably be accepted as a secure repository at this stage, given what is unknown and the highly sensitive siting of the proposed repository. I wish to impress upon the Board that this feature of the proposed development poses a serious pollution, health and safety risk.

10.4.3 In addition to the borrow pit, 65,000m³ of peat and other spoil is proposed to be put into a proposed new repository close to the location for proposed Turbine 4. This is a location which is bound by watercourses to the north and east (see Drawing No. 190114-12). Peat is proposed to be spread on this section of the site up to one metre in height. Noting that parts of the site have been subject to drainage relating to forestry, it must be understood that some 85% and more of active peat can be understood to be made up of water and it is anticipated that the huge volumes of peat to be dumped in the repository would have a substantial water component. An interceptor drain is proposed to be installed around the perimeter of the repository and the edge of the stored peat is proposed to be shaped at a slope of 1(v) : 5(h). There appears to be no other specific measures to contain the peat and other spoil within the designated repository area. There would be a significant concern about failure to actually contain wet peat in this location, the overloading of constructed drains, and the spread of waste materials beyond the designated area, given its proximity to existing watercourses.

10.4.4 I put it to the Board that there are many uncertainties relating to the handling, management and storage of peat and other waste materials with this application and that one cannot reasonably conclude that the applicant's provisions are safe or will ensure the protection of the environment. In terms of an overview, I note the contours of the area of the proposed repositories, the proximity to existing watercourses, the characteristics of disaggregated peat, the volume and pattern of rainfall in this upland location, and the unknowns relating to the proposed systems for retaining the deposited waste materials. I cannot determine that the Board could be satisfied that the proposed permanent repository structures would remain effective for the retention of peat and other spoil. The failure risk associated with

these proposed structures cannot be fully understood and this is unacceptable. This feature of the proposed development could not be considered to be in accordance with the proper planning and sustainable development of this area.

10.4.5 Further to the above, I note the changes to Donegal County Development Plan since the making of the application to the Board in relation to the variation of the Plan in 2022 with regard to Map 8.2.1 – Wind Energy. Based on this Map, the majority of the site is in an area that is ‘Open to Consideration’ for wind farm development. From the details provided in the applicant’s response to the observations made to the Board, it is noted that substantial sections of the site, particularly on its east side, are now designated ‘Not Normally Permissible’. This includes the location for Turbine 2 and areas in the immediate vicinity of Turbines 1, 3 and 7. The applicant notes that the location of Turbine 2 is in a small pocketed area which is deemed of high landslide susceptibility. I submit that these pockets add up to comprise a substantial area of this site. While I note the applicant’s submission on the variation of Map 8.2.1 in seeking to address the impact on the number and extent of turbines on this site (pages 60-66 of the response to the observer submissions), I must impress upon the Board that concerns relating to landslide susceptibility on an upland site where it is proposed to store 415,600m³ of peat cannot go unnoticed.

10.4.6 Finally, I ask that the Board should also have regard to my considerations on drainage and on soils, geology and water in the Environmental Impact Assessment section of my assessment. The stability of the proposed structures to contain the vast volumes of waste material arising from the proposed development is called into question in this instance.

10.5. **Site Drainage**

10.5.1 The proposed development is intended to incorporate a highly complex drainage system as outlined below.

10.5.2 The EIAR submits that no routes of any natural drainage features are proposed to be altered. It is proposed that there would be no direct discharges to any natural watercourses, with all drainage waters being dispersed as overland flows. All

discharges from the proposed work areas are proposed to be made over vegetation filters at an appropriate distance from natural watercourses. Buffer zones of 50m around rivers and streams are proposed. The EIAR notes that there would be four new stream crossings and five potential crossing upgrades. Artificial drains that are in place may have to be diverted around proposed work areas to minimise the amount of water in the vicinity of work areas. Where it is not possible to divert these drains around work areas, the drains are proposed to be blocked to ensure sediment-laden water has no direct route to other watercourses. The blocking is intended to only take place after an alternative drainage system to handle the water has been put in place. Existing artificial drains in the vicinity of existing site roads are proposed to be maintained in their present location where possible. If the artificial drains are to receive drainage from work areas, check dams are proposed to be added to control flows and sediment loads. If road widening or improvement works are necessary along existing roads, where possible, the works are proposed to take place on the opposite side of the road to the drain. It is noted that many existing internal roads are proposed to be significantly widened as part of the proposed development, i.e. to widths of 5 metres.

10.5.3 The proposed drainage system for this development is intended to employ two methods as follows:

- The first method involves keeping clean water clean by avoiding disturbance to natural drainage features, minimising any works in or around artificial drainage features, and diverting clean surface water flow around excavations and construction areas.
- The second method involves collecting any drainage waters from work areas within the site that might carry silt or sediment to allow attenuation and settlement prior to controlled diffuse release.

10.5.4 This proposed drainage scheme would be highly complex in a challenging physical environment. Having examined the applicant's proposed drainage provisions (in particular Appendix 4-4 of the EIAR), it is noted that the proposals include the following:

- Interceptor drains upgradient of work areas to collect surface water flow runoff and divert it to be redistributed over the ground surface as sheet flow. The material excavated to make these drains would be compacted on the downslope edge of the drain to form a diversion dike. The applicant estimates that areas in which works are carried out to construct roads, turbine bases or hardstands would have been built up with large grade hardcore and that this would retain sufficient void space to allow water to infiltrate the subsurface of the constructed areas. It is not anticipated that roadways or other infrastructure would intercept ground-conveyed surface water runoff such that it would result in scouring, overtopping or spill-over. Interceptor drains may have to be retained in certain locations to prevent roadways acting as conduits for water that might infiltrate the road sub-base. The velocity of flow in the interceptor would be controlled by check dams. Interceptor drains would be installed horizontally across slopes to run parallel with the natural contour line of a slope.
- Swales would be used to intercept and collect runoff from construction areas, installed downgradient of work areas to collect surface water flow runoff. Swales would be similar in design to interceptor drains.
- Check dams, made up of straw bales or stone, would control the velocity of flow in interceptor drains and swales. Straw bales would be secured to the bottom of the drainage swales with stakes. Clean 4-6 inch stone would be built up on either side and over the straw bale to a maximum height of 600mm over the bottom of the interceptor drain. They would be installed at regular intervals to ensure the bottom elevation of the upper check dam is at the same level as the top elevation of the next downgradient check dam in the drain. The centre of the check dam is to be approximately 150mm lower than the edges to allow excess water to overtop the dam in flood conditions. If necessary, any excess sediment behind the dams would be removed.
- Level spreaders would be constructed at the end of each interceptor drain to convert concentrated flows in the drain into diffuse sheet flow on areas of vegetated ground. These would be located downgradient of proposed work areas. The discharge point is to be on level or only very gently sloping ground rather than a steep slope to prevent erosion. The slope in the channel leading

into the spreader is to be less than or equal to 1%. The slope downgradient of the spreader onto which the water would dissipate is to have a grade less than 6%. If a grade of less than 6% is not available in the immediate area downgradient of a work area at the end of a diversion drain, a piped slope drain is to be used to transfer the water to a suitable location. The spreader is to be level across the top and bottom to prevent channelised flow leaving the spreader or ponding occurring behind the spreader. The top of the spreader lip is proposed to be 150mm above the ground behind it, with the length of the spreader being a minimum length of four metres and a maximum length of 25 metres.

- Piped stone drains would be used to convey surface water runoff from diversion drains downslope to flat areas where it would be reconverted to diffuse sheet flow. It is proposed that they would only be established on slopes of less than 6% in grade. They would transfer water away from areas where slopes are too steep to use level spreaders. The entrance at the top of the pipe would be stabilised with sandbags if necessary. The bottom of the pipe would be placed on a slope with a grade of less than 1% for a length of 1.5 metres before outflowing onto a rock apron. The rock apron at the outlet would consist of 6-inch stone to a depth equal to the diameter of the pipe and a length six times the diameter of the pipe. The width of the rock apron would be three times the diameter of the pipe where the pipe opens onto the apron and would fan out to six times the diameter of the pipe over its length.
- Vegetation filters comprising existing vegetated areas are to be used to accept surface water runoff from upgradient areas. They would carry outflow from the level spreaders. They would not be used in isolation for waters with high silt loadings.
- Stilling ponds would be used to attenuate runoff from work areas and would handle runoff from roads and hardstanding areas during the operational phase. They would intercept runoff potentially laden with sediment. The points at which water enters and exits the stilling ponds would be stabilised with rock aprons. Water would flow out through the stilling pond through a stone dam partially wrapped in a geotextile membrane. They are to be dimensioned so that the length to width ratio would be greater than 2:1. Where ground

conditions allow, they would be constructed in a wedge shape. Each stilling pond would be a minimum of 1-1.5 metres in depth. Embankments forming the sloped sides of stilling ponds would be stabilised with vegetated turves. Stilling ponds would be located towards the end of swales, close to where water will be reconverted to diffuse sheet flow. Sediment would be cleaned out of the stilling pond when it exceeds 10% of pond capacity.

- A siltbuster is proposed to filter any water pumped out of excavation areas, if necessary, prior to discharge to stilling ponds or swales.
- Dewatering silt bags are proposed to remove any remaining silt in potentially silt-laden water collected from work areas. These would be used downgradient of stilling ponds at the end of drainage swale channels.
- Sedimats would be placed at the outlet of silt bags to provide further treatment of the outfall from the silt bag. They would be pegged or staked to the ground surface and would extend to the full width of the outfall.
- Culverts would be suitably sized for expected peak flows in watercourses. Some culverts would be installed to manage drainage waters from work areas, particularly where the waters would have to be taken from one side of a roadway to the other for discharge. The size of the culverts would be influenced by the depth of the track or road sub-base. Culverts are proposed to be installed with a minimum internal gradient of 1%. Smaller culverts are proposed to have smooth internal surfaces. Depending on the management of water on the downslope of culverts, large stone may be used to interrupt the flow of water.
- Silt fences would be installed around existing watercourses in certain locations, particularly where works are proposed within the 50-metre buffer zone of a natural watercourse. They would be installed as single, double or a series of triple silt fences, depending on space availability and anticipated sediment loading.

10.5.5 As well as these drainage measures associated with the development of the wind farm infrastructure, there are further drainage proposals associated with forestry

felling, the borrow pit, the peat repository area, floating roads, and cable trenches.

These are as follows:

- For forestry felling, these would include blocking existing drains, installation of temporary silt traps, and provision of new collector drains and sediment traps to intercept water upgradient of felling areas excavated at a gradient of 0.3%-3% gradient. All new collector drains are proposed to taper out before entering the aquatic buffer zone to ensure the discharging water gently fans out over the buffer zone before entering the aquatic zone. Where there is a risk of severe erosion occurring, extraction would be suspended during periods of high rainfall. Double or triple sediment traps would be installed in areas particularly sensitive to erosion or where falling within the 50m buffer of watercourses. Brash mats would be used to support vehicles on soft ground and renewal would take place when they become heavily used and worn. Straw bales and check dams are proposed to be placed downgradient of timber storage sites. It is proposed that there would be no crossing of streams by machinery. It is also proposed that branches, logs or debris would not be allowed to build up in aquatic zones.
- Surface water is proposed to be contained in the borrow pit area but it is proposed to control the level of the water by creating a single point outlet from the basin-like area to ensure water does not overtop the pit. Interceptor drains would be installed upgradient of the borrow pit before extraction. A mobile pump is proposed to be used at the construction phase to keep the pit free of standing water.
- For the peat repository area, silt fences, straw bales and biodegradable matting are proposed to control surface water runoff, with drainage routed to an oversized swale and a stilling pond before being discharged to on-site drains.
- For floating roads, cross drains would be installed beneath the road construction corridor.
- For the cable trenches, excavated material is proposed to be stored on the upgradient side of a trench. Where runoff arising from rainfall occurs, material is proposed to be contained in the downgradient cable trench. Excess subsoil

would be removed from the cable trench work areas and transported to the borrow pit or repository or used for landscaping or reinstatement works. On steeper slopes, it is proposed that silt fences would be installed temporarily downgradient of the cable trench works area or on the downhill slope below where excavated material is proposed to be temporarily stored to control runoff.

10.5.6 I observe that the applicant's site drainage proposals represent a highly complex system of drainage, involving a very extensive range of drainage measures, many of which necessitate particularly precise actions in a challenging upland environment. The requirement for such a system evidently points to a site which poses very many drainage difficulties, in my opinion. The sensitivity of this location to environmental damage by way of imprecise or failing drainage measures arises from the dominant soils on the site being peat, the upland nature of the site, the rainfall pattern for this area, the prevalence of watercourses throughout, and the physical intrusion caused by the construction works in providing a significant array of infrastructure, including deep excavations for turbines, substantial peat repositories, upgrading of 6.6km of existing internal roads, and provision of almost 10km of new internal roads, including floating roads. I repeat that there are vast volumes of peat intended to be excavated, moved and deposited at locations where there is clearly an imprecise understanding of these locations and the management of this spoil.

10.5.7 The Board will note that the dominant habitat on the site, conifer plantation, has been originally planted on peatland habitats. The destabilising impacts of the proposed engineered drainage works, together with clear felling, at such a sensitive upland location poses a serious environmental threat, in my opinion. There are clear concerns about the functionality of these provisions, particularly for any of those that may arise after a prolonged dry spell followed by the impact of heavy rainfall events. The ability to adequately manage and maintain drainage infrastructure during such events must be called into question and the lack of comprehensive details on the land and ground conditions of the extensive area over which these provisions would be applied is evident. The Board will note that the applicant intends to commence the construction works outside of the breeding season for birds, i.e. the period from April to July inclusive. In other words, the forestry felling, the intensive and large-scale

construction activities, the excavation of huge volumes of peat and their transportation and deposition within the site, and associated drainage provisions would commence in the autumn and winter period when the most significant threats arise from the works coinciding with the wettest rainfall periods in this upland, peat-dominated environment. The proposed drainage provisions compound the concerns to the water environment by those relating to the management of waste materials. I ask the Board can one be assured that the site drainage measures are adequate, safe and proven? I submit that they are not. Can they be so precisely applied and managed in challenging conditions? It is my submission that they could not. The unassured nature of the proposed measures, by the regularity of the use of terms such as “where it is not possible”, “if works are necessary”, “where possible”, “if necessary”, “where ground conditions allow”, “depending on”, etc., is greatly concerning for a proposed development seeking to handle, store and manage 415,600m³ of peat, while offering to provide a distinctly precise engineered site drainage system.

10.5.8 Further to the above, I again note from the details provided in the applicant’s response to the observations made to the Board that substantial sections of the site, particularly on its east side, are now designated ‘Not Normally Permissible’ in Donegal County Development Plan. This includes the location for Turbine 2 and areas in the immediate vicinity of Turbines 1, 3 and 7. The applicant notes that the location of Turbine 2 is in a small pocketed area which is deemed of high landslide susceptibility. I submit that these pockets add up to comprise a substantial area of this site. While I note the applicant’s submission on the variation of Map 8.2.1 in seeking to address the impact on the number and extent of turbines on this site (pages 60-66 of the response to the observer submissions), I must impress upon the Board that concerns relating to landslide susceptibility on an upland site where it is proposed to store 415,600m³ of peat cannot go unnoticed, particularly with due regard being given to the substantial engineering of this site relating to site drainage management.

10.5.9 Finally, in addition to the above, the Board should also have regard to my considerations on management of waste materials and soils, geology and water in the Environmental Impact Assessment section of my assessment.

10.6. **Impact on Biodiversity**

10.6.1 I note the upland nature of the site as well as the predominant habitat of conifer plantation which has been planted on blanket bog. The watercourses along the perimeter and in the vicinity of the site, including the Crana and Owenkillew Rivers, are acknowledged also. These downstream watercourses are acknowledged as likely to provide suitable habitat for Atlantic salmon, brown trout, European eel and Lamprey. The Board will again note my concerns relating to peat storage and site drainage and the impacts on waterbodies on and adjoining this site. These are principal concerns which have potentially very serious impacts on biodiversity on and beyond this site.

10.6.2 Notwithstanding what presents substantially as a commercial forestry site, it is clear from the applicant's surveys that evidence of and observance of a wide variety of fauna has occurred on and in the immediate vicinity of this site. This includes otter, red squirrel, common frog, smooth newt, Irish hare, and pine marten, as well as several bat species, including common pipistrelle, Myotis, soprano pipistrelle, Leisler's, and Brown long-eared bat. The first ornithological surveys recorded an expansive range of birds of significant conservation value at this site. This included the Annex I species Golden Eagle, Golden Plover, Goshawk, Hen Harrier, Merlin, Osprey, Peregrine, Red Kite, and Whooper Swan, as well as Red listed species Curlew, Kestrel, Red Grouse, Snipe, White-tailed Eagle, and Woodcock. The applicant's recent surveys, set out in its response to the submission by the Department of Housing Local Government and Heritage (DAU), strongly reinforce the importance of this site and its immediate location for White-tailed Eagle, Merlin and Goshawk. The following is noted:

- Goshawk and Merlin were both recorded breeding within the wind farm site during the 2022 breeding season. These species were not recorded breeding within the wind farm site previously.
- Between October 2021 and September 2022, there has been 37 observations of White-tailed Eagle which is a marked increase from the two flights recorded previously.

- A summary of the key findings from October 2021 and September 2022 inclusive is:
 - Golden Eagle was observed on only one occasion during vantage point surveys.
 - Golden Plover was not observed during this survey period.
 - Goshawk was observed on six occasions during the vantage point surveys. The majority of observations related to a confirmed breeding territory within the wind farm site. This is a noteworthy change.
 - Hen Harrier was observed on 25 occasions during the vantage point surveys and on eight occasions during the dedicated Hen Harrier roost surveys, all of which were outside the core breeding season (April to August). Most observations were of birds hunting or commuting. Hen Harriers were observed going to roost on four occasions.
 - Merlin were observed on six occasions during the vantage point surveys, on one occasion during the breeding walkover surveys and on 11 occasions during the breeding raptor surveys. Breeding behaviour was recorded at two locations. These observations confirm the presence of a nest, however, the nest sites were not located.
 - Osprey was observed on only one occasion during the breeding raptor surveys.
 - Peregrine were observed on six occasions during the vantage point surveys.
 - Red Kite were observed on only one occasion during vantage point surveys. An individual was observed commuting adjacent to the wind farm site.
 - Whooper Swan were observed on only two occasions during the vantage point surveys.
 - Grey Heron were observed on four occasions during the vantage point surveys.
 - Greylag Goose were observed on only one occasion during the vantage point surveys. A flock of 100 birds was observed commuting in April along the margins of the wind farm site.

- Kestrel were observed on 24 occasions during the vantage point surveys, on six occasions during the breeding walkover surveys and on 11 occasions during the breeding raptor surveys.
- Snipe were observed on 21 occasions during the breeding walkover surveys.
- White-tailed Eagle was observed on 20 occasions during the vantage point surveys between January and August 2022, on three occasions during the breeding walkover surveys and on 14 occasions during the breeding raptor surveys.
- Buzzard were observed on 69 occasions during vantage point surveys, 16 occasions during the breeding walkover surveys and 33 occasions during the breeding raptor surveys.
- Sparrowhawk were observed on 21 occasions during the vantage point surveys, on five occasions during the breeding walkover surveys and on six occasions during the breeding raptor surveys.
- Woodcock were not observed during this survey period.

10.6.3 The evident concerns relating to the proposed development for bird and bat species of conservation value are loss of habitat, displacement, and collision with turbines. These concerns are somewhat exacerbated when it is observed that there are 23 wind farms and 113 existing/permitted turbines within 20km of the site, with some 39 turbines within 3km of the site and 14 turbines permitted beside the site at Aught Wind Farm. The potential impact of the proposed development on breeding, roosting and foraging bird species and on foraging bats is apparent.

10.6.3 I note the submission to the Board from the Department of Housing, Local Government and Heritage. It highlighted a principal concern relating to Hen Harrier. The Department noted the location of a Hen Harrier roost on the site and acknowledged the revised design. However, the Department remained concerned that the extent of data available to inform the EIA and the mitigation proposed for breeding and wintering raptor species is inadequate. It was concerned that identifying a sensitive roost site for Hen Harrier is not best practice and may result in deliberate disturbance. Noting the majority of bird surveys was undertaken in the 2016-2019 period, reference was made to advice that data used in ecological

assessment should be gathered within 2-3 years of the application. The Department requested further information on all threatened bird species recorded during the 2021-2022 breeding and wintering seasons, as well as an assessment and/or comparison of Hen Harrier data from 2020/2021 – 2021/2022 roost seasons. It further acknowledged the volume of Hen Harrier (both breeding and roosting), Golden Eagle and Merlin activity and submitted that the risks to these species are not fully considered and/or mitigated. It was further noted that the post-construction bird monitoring programme does not detail the response and/or action to be taken if Hen Harrier or Golden Eagle carcass finds are recorded. The Department highlighted that an EIA should not have lacunae or gaps and should contain complete, precise and definitive findings and conclusions, with projects being authorised only if they are certain of the outcome on protected species of International interest, including Annex I birds species in the Birds Directive. The applicant's response to this submission demonstrates the significance of the Department's submission on the initial application and the concerns raised, notably the inadequacy of data available to inform the EIA, mitigation proposed for breeding and wintering raptor species, and the risks to species not being fully considered and/or mitigated. In addition, the applicant's response now most clearly emphasises the importance of this site and its immediate environs for White-tailed Eagle, Merlin and Goshawk. I note the Department did not respond to the applicant's response to its submission.

10.6.4 Further to the Department's concerns relating to Hen Harrier, I draw the attention of the Board to the recent publication by NPWS "*The 2022 National Survey of breeding Hen Harrier in Ireland*", published in 2024. This fifth national survey of the species in Ireland has documented very significant further population declines and a diminished range, both in the wider countryside and within Special Protection Areas (SPAs). The following is noted:

- The hen harrier population is severely affected by a range of activities, pressures, and threats across Ireland. The population has declined substantially in the short-term 2015 to 2022 by one third and in the long-term 1998/2000 to 2022 by more than half.

- The hen harrier population in Ireland is estimated at 84 confirmed and 21 possible breeding pairs (85-106) in 2022. This is a decline of one third (33%) in the total population since the previous national survey in 2015 and a 27% contraction in their breeding range for the same period.
- Given the continued declines and myriad pressures and threats acting on hen harrier in Ireland, it is likely the hen harrier will feature on the next Red-list of the Birds of Conservation Concern in Ireland (BoCCI) subject to a full assessment using the BoCCI Red-list criteria.
- At the current rate of decline, population extinction could be expected within 25 years and there could be fewer than 50 breeding pairs of hen harrier remaining within the next 10 years.
- Some of the known historical regional populations appear functionally extinct for breeding purposes, including Inishowen Peninsula.
- The regional results indicate that no known breeding hen harrier has been recorded for the past 10 to 20 or so years in Inishowen.
- In the past, the Inishowen region held small numbers of breeding hen harrier and surveyors are optimistic that breeding hen harrier could occur in this area if suitable habitat is protected and maintained.
- The most frequently occurring pressures and threats highlighted by surveyors in 2022 as negative for hen harriers close to breeding / nesting sites (i.e. in the 500 m zone) include: forest management and use; the mechanical removal of peat; increased access (via paths, tracks, cycling tracks (includes non-paved forest roads); non-intensive grazing; wind energy production and agricultural intensification.
- Surveyors in 2022 identified three main sectoral pressures across breeding hen harrier sites: forestry (NPWS, 2015), wind energy development (NPWS, 2021) and agriculture (NPWS, 2015). The negative effects of activities associated with these sectors typically manifest directly on the species (e.g. nest destruction, disturbance, or displacement) and also indirectly on the supporting breeding and/or foraging habitats via destruction, disturbance, or displacement i.e. loss of habitats.
- Surveyors have recorded that the wider loss and degradation of formerly-suitable breeding and foraging habitats, particularly through agricultural

improvement, removal of scrub and heather; afforestation and intensification of land management often associated with wind energy development are determinants of hen harrier occurrence and/or abundance. The quality and quantity of prey species are also likely to be significantly affected by these factors.

- A range of negative interactions can occur with wind energy development, including displacement from foraging habitats, avoidance, disturbance at nesting or roosting sites, lower breeding success and mortality.
- Many surveyors reported that there is poor spatial planning around extant sites and there is persistent loss of suitable hen harrier habitats during wind energy development projects, but particularly in regions of Co. Donegal, Co. Clare, Co. Limerick and Co. Kerry.
- An increasing number of hen harrier collision strikes have been reported since the last national survey (NPWS, 2022) and a number of well-used winter roost sites have had turbines constructed within and/or immediately adjacent and resulted in displacement effects on the birds at the roost sites (O'Donoghue, 2021).
- The wind energy work programmes in Ireland, typically follow the best practice guidance in Scotland (SNH, 2017; NatureScot, 2023). These methods may not be as appropriate in Ireland, and/or require modifications, due to variations in e.g. breeding or wintering seasons, typical home range size of hen harriers in Ireland, which may be much larger (Irwin et al., 2012) than in Scotland (Arroyo et al., 2009).

The report's recommendations include:

- Hen harrier conservation in Ireland requires urgent implementation of concrete and significant actions promptly to prevent its further deterioration.
- The 2015 published habitat mapping for the SPAs needs to be updated and it is recommended that it be expanded to include the non-designated regionally important areas.
- Disturbance and habitat losses with the hen harrier range from land-use changes and development activities must be reduced.

10.6.4 I note that there is a Hen Harrier roost on the site of the proposed development. I must also again highlight the applicant's recent survey findings on Hen Harrier at the site of the proposed development. The findings from October 2021 and September 2022 were that Hen Harrier was observed on 25 occasions during the vantage point surveys and on eight occasions during the dedicated Hen Harrier roost surveys outside the core breeding season (April to August). The significance of this location for Hen Harrier in the Inishowen Peninsula, given the findings of *The 2022 National Survey of Breeding Hen Harrier in Ireland*, should be acknowledged. Further wind farm development at this location would add to the erosion of suitable habitat and likely lead to further decline in Hen Harrier in the Inishowen Peninsula.

10.6.5 The ornithological impact by the development of the proposed wind farm has potentially profound impacts for birds of significant conservation value, impacts that include collision, loss of breeding habitat, and loss of foraging habitat. For example, the applicant in its recent findings now estimates that the collision risk for White-tailed Eagle, in the absence of mitigation, would be at a rate of one potential bird collision every c. 1.9 years. The relevance of the loss of birds of conservation value on this site should not be misunderstood when regard is had to the existence of extensive wind farm development in this area. One cannot pursue a strategy which is reliant upon extensively more similar habitat on the Inishowen Peninsula and determine that this will serve as alternative breeding, foraging and nesting habitat for the wide range of birds of conservation value that utilise this site when the value of the proposed site is removed by the development of the wind farm. There is no understanding of the value of the alternative lands, the effects of other wind farm development thereon, the condition of such habitats, the suitability of such habitats, etc. I note that the applicant in the EIAR presented an understanding that collision risk is generally low for Annex I species on this site and emphasised the extent of alternative habitat elsewhere on the peninsula. I submit to the Board that the applicant's own recent survey findings conflict with these submissions such that it is now proposed to provide additional mitigation measures such as pre-commencement surveys, vantage point surveys and seasonal construction constraints for Merlin and a comprehensive programme of monitoring for White-tailed Eagle and a carcass removal programme. Clearly, the new understanding of the

increased ornithological value of this site can be seen. This point needs to be understood, i.e. it remains a significant site for birds of conservation value and its value appears to have been reinforced and is increasing by the applicant's most recent survey findings.

10.6.6 In addition to the impact on birds, I note that the applicant has submitted in the EIAR that there is the potential for high collision risk for bats at several locations on the site. To address this, the applicant proposes the implementation of curtailment during periods with high median bat activity, with simultaneous activity monitoring taking place. 'Curtailment', according to Appendix 6-2 of the EIAR, involves raising the cut-in speed with associated loss of power generation in combination with reducing the blade rotation below the cut-in speed. It appears from this that, in order to avoid high levels of bat collision and mortality, it is intended to reduce the output from the wind farm. This is proposed for Turbine 6 in the summer (June to mid-August) and for Turbines 3, 5, 6, 8 and 11 in the Autumn (mid-August to October). These are lengthy periods which could potentially affect the efficiency and output of the wind farm in its early years. I submit that if the potential collision risk is high then the potential mortality rate in the early years would likely be high, leading ultimately to the displacement of bat species after early years of operations. The proposed development would clearly not have a low impact on bat species.

10.6.7 On the principle of the operation of the proposed wind farm at this site, I ask: Does one allow for a potentially substantial bat mortality rate in the knowledge that the species would adapt by being displaced at this location and by the cessation of foraging and potential roosting at this site? This is not sustainable in my opinion. This is also not a sustainable strategy, as could be perceived, for dealing with birds of special conservation value. Awaiting displacement is not an environmentally sustainable approach. As the ongoing development of wind farms progresses in this location (39 turbines within 3km of the site and 14 turbines permitted beside the site), it is reasonable to determine that this area is being eroded of its fauna of conservation importance. More wind farm development (indeed higher turbines) will continue the trend of reduction in biodiversity and this is unsustainable.

10.6.8 With the making of the above observations, one must query how the proposed development could be seen to be compatible with Objectives NH-O-1 and NH-O-10 of the current Donegal County Development Plan, which seek to protect, sustainably

manage and enhance the rich biodiversity of the county for present and future generations and to maintain and restore ecosystems and to conserve valuable or threatened habitats and species in order to prevent further loss of biodiversity and to meet the EU's target to halt biodiversity loss. I submit that permitting the proposed development, in the knowledge of its likely adverse environmental impacts, constitutes direct conflict with these objectives.

10.6.9 In conclusion, it is reasonable to ascertain that the site location and its environs are of significant importance for a wide range of birds of conservation value, in particular Hen Harrier, White-tailed Eagle, Merlin and Goshawk. This location is known to be important for breeding Merlin and Goshawk. The decline in breeding Hen Harrier in the Inishowen area is a particular concern. The extensive development of wind farms at this location must be seen as resulting in direct habitat loss and fragmentation, habitat degradation, and disturbance and displacement of protected bird species and other species of conservation value. It would clearly result in potential adverse impacts for bats. The proposed development, along with existing and permitted wind farms, would likely culminate in a decline in nesting Hen Harrier, Merlin and Goshawk and on the roosting and foraging of other Annex I and Red listed bird species. The question at hand is: Does one continue the decline of species of conservation value at this location in the pursuit of further wind farm development? I cannot see how this could be seen to be environmentally sustainable in such a sensitive location, where the applicant's own surveys and findings have so clearly demonstrated this to be the case.

10.7. **Shadow Flicker**

10.7.1 The casting of shadows by turbines and the rotation of blades can occur with wind farm development in certain defined circumstances. As a result, this can cause potential nuisance, in particular to residential properties in the vicinity. For this to occur the sun is required to be shining and to shine at a low angle, notably after dawn and before sunset. Along with this, a turbine is required to be between the sun and the affected property and there must be enough energy to make the turbine blades move. Where shadow flicker can potentially occur the Wind Energy Guidelines recommend that it should not exceed 30 hours per year or 30 minutes per

day for dwellings within 500 metres. The Guidelines also note that, at distances greater than 10 rotor diameters from a turbine, the potential for shadow flicker is very low.

10.7.2 For the assessment of impact from shadow flicker, I note that turbines with a tip height of 173m, a rotor diameter of 140m and a hub height of 103m are those that were modelled by the applicant. The applicant considered all dwellings within 1.4km of turbine locations in its assessment, which totalled 22 dwellings, and these are shown in Figure 5-5 of the EIAR. The predicted shadow flicker estimated to occur is presented in Table 5-9 of the EIAR. This identified that 10 properties may experience daily shadow flicker in excess of the guideline threshold of 30 minutes per day in predicted worst case conditions. It was estimated that, when the regional sunshine average of 28.82% is taken into account, the total annual guideline limit of 30 hours is predicted as being exceeded at one of the modelled properties. This is a derelict property and is in the control of the applicant.

10.7.3 I note that the applicant's assessment also considered cumulative shadow flicker with Sorne Hill I and Aught Wind Farms. It was concluded that no properties have the potential to experience cumulative shadow flicker impacts.

10.7.4 Mitigation measures are proposed in Section 5.9.3.10 of the EIAR in the event of shadow flicker exceeding guideline threshold values of 30 minutes per day at residential receptor locations. In the event that any nuisance could potentially arise, I note that technology is available to prevent shadow flicker from affecting neighbouring properties. A simple and effective measure to address concerns is to turn off offending turbines during periods when they are most likely to potentially create shadow flicker. A turbine can be appropriately programmed for this to occur. Automatic controllers can be employed to stop those turbines which could give rise to shadow flicker for the hours in any year that the phenomenon could potentially occur. These can be incorporated into the controls of the turbines and can be programmed to continually monitor sunshine intensity and wind direction and can automatically take the turbines out of operation to prevent moving shadows affecting houses. With such mitigation available, I do not consider that shadow flicker could be

considered to be a potentially significant issue impacting on the amenity of residents in the vicinity of this wind farm development.

10.8. **Noise Impact**

10.8.1 *Noise Sources and the Existing Environment*

When considering the issue of noise emissions, I must acknowledge both mechanical noise and aerodynamic noise. The former is derived from moving parts contained within the proposed turbines, such as from the gearbox or generator. I note that noise derived from this source may have tonal components and this may also be dependent on wind speed and the consequent rotation of the blades. I do not intend to focus on this noise type in this assessment as modern turbines generally provide for insulation that prevents the transmission of mechanical noise. It is aerodynamic noise that merits consideration as the likely potential noise source for the wider community.

I acknowledge that aerodynamic noise could be significant from large turbines. The aerodynamic noise derived from turbines increases with wind speed and rotational speed. As distance increases from a noise source the noise spectrum becomes more biased towards the low frequencies. This wind turbine noise fluctuates at a rate depending on the speed of rotation. This is referred to as 'blade swish'. As distance from a turbine increases this effect generally reduces. I note that the response to wind turbine noise would be dependent on an array of factors and that individuals respond differently to similar noise. In this context, it is reasonable to conclude that different people have differing degrees of hearing sensitivity. What is of particular relevance in determining the noise impact of the proposed development on the residents in the vicinity of the site is that one can reasonably state that the residents in this remote area generally experience an environment where there are low background noise levels at present. I acknowledge that there are established wind farms in the area and that wind farm-related activities comprise a source that influences the noise environment in recent times. I note that at night-time one would expect that significant regular noise sources, such as road traffic and farming and forestry-related activities which impact on the local area would be substantially

reduced and low background noise would generally prevail as the extent of man-made noise sources decline. The impact at night-time from the proposed development by the swishing of blades from the large turbines proposed could potentially affect sleep patterns and could potentially generate stress where turbine noise is audible, particularly where windows may be left open in houses in the vicinity. The distinctive difference with blade swishing, when compared with other types of noise experienced within a rural environment, should be acknowledged as relevant in assessing noise impact. This type of noise could be perceived to change the character of the noise environment.

Wind turbine noise evidently can only occur when turbines are rotating. Noise levels are found to be greatest when the wind is blowing from the turbines in the direction of a sensitive receptor. I acknowledge that turbine noise may be masked by vegetation. I note the exposed, elevated nature of the site and the significant height of the proposed turbines. I also note the low density of housing in the vicinity and distance from urban settlements. Another important issue is the potential difference in wind speeds at the upper levels of a turbine of the height proposed and those experienced at ground level. With the tall structures proposed at this site it is perceivable that wind speed could be sufficient to rotate the proposed turbines while at lower levels the wind experience is not notable or is less detectable. The applicant's background noise assessment becomes an important feature to determine potential consequences in this scenario.

Finally, I am aware of the widely held public concerns relating to infrasound, amplitude modulation causing periodic thumping at low frequencies, and the negative health effects seen to arise from wind farm development on some people exposed to such development. There is extensive conflicting research on these issues. The assessment of this planning application clearly cannot provide the context for the making of decisions on public policy relating to such health matters. However, one cannot readily deflect from the public health impact if it is an issue that would arise in a particular project.

10.8.2 Wind Energy Guidelines

I note that the Wind Energy Development Guidelines, dating from 2006, remain in place and have not been updated. This is particularly concerning given the outdated considerations upon which such guidelines would have been based upon, most notably the significantly smaller turbines which would have been prevalent at the time to inform the detail of such guidance. While it is most regretful that there are no foreseeable changes to guidance, I must determine that the prevailing guidance on noise is that set out in the current national Wind Energy Development Guidelines from 2006. There are no other Section 28 Guidelines to which the Board can refer to when considering the issue of noise or any other environmental impacts from wind energy development. I am aware of WHO guidance, inclusive of the *World Health Organisation Environmental Noise Guidelines for the European Region 2018* and the *World Health Organisation Guidance for Local Authorities Health and Environment. Noise and Health 2000*, the draft Wind Energy Development Guidelines 2019, and the very extensive conflicting research on noise related to wind farm development. Evidently much can be learned from international best practice and from such research. The Board is in somewhat of a vacuum at present with such outdated guidance which forms the current Section 28 Guidelines.

Section 5.6 of the Guidelines refers to 'Noise'. The Guidelines acknowledge much of what has been referred to above in discussing noise in general. It is noted that good acoustical design and carefully considered siting of turbines is essential to ensure that there is no significant increase in ambient noise levels at nearby sensitive receptors. It is also noted that sound output from modern turbines can be regulated to mitigate problems. The Guidelines require that noise impact should be assessed by reference to the nature and character of noise sensitive locations. They require noise limits to be applied to external locations and that such limits should reflect the variation in both turbine source noise and background noise with wind speed. The following is particularly noted:

“In general, a lower fixed limit of 45 dB(A) or a maximum increase of 5 dB(A) above background noise at nearby noise sensitive locations is considered appropriate to provide protection to wind energy development neighbours. However, in very quiet areas, the use of a margin of 5 dB(A) above background noise at nearby noise sensitive properties is not necessary to offer a reasonable degree of protection and may unduly restrict wind energy developments which should be recognised as having wider national and global benefits. Instead, in low noise environments where background noise is less than 30 dB(A), it is recommended that the daytime level of the LA90, 10min of the wind energy development noise be limited to an absolute level within the range of 35-40 dB(A)

Separate noise limits should apply for day-time and for night-time. During the night the protection of external amenity becomes less important and the emphasis should be on preventing sleep disturbance. A fixed limit of 43 dB(A) will protect sleep inside properties during the night.

In general, noise is unlikely to be a significant problem where the distance from the nearest turbine to any noise sensitive property is more than 500 metres.”

A reasonable interpretation of the limits recommended above would be:

- A fixed limit of 43 dB(A) at a noise sensitive location for night-time hours,
- 45 dB(A) or up to 5 dB(A) above background noise, whichever is the greater, at a noise sensitive location for daytime hours, and
- 35-40 dB(A) at a noise sensitive location for daytime hours where background noise is less than 30 dB(A).

I note that noise conditions attached with a grant of planning permission for wind farm development in Ireland frequently reflect the above provisions.

I observe that none of the existing houses in the vicinity of the site are within 500 metres of any proposed turbine. I observe that the scale and height of the proposed turbines are distinctly greater than those types of turbines that would have generally been prevalent at the time of the preparation of the Wind Energy Development Guidelines.

10.8.3 *Operational Noise*

I note the applicant's submission forming Chapter 11 of the EIAR and the supporting Appendices 11-1 to 11-9. This submission noted that there are 93 noise sensitive locations (NSLs) within 3.5km of the proposed turbine locations, with the nearest being 723m from proposed Turbine 11. The applicant's assessment considered the construction, operational and decommissioning phases of the development.

A background noise survey was conducted through installing unattended sound level meters at nine locations (residential properties) within 3km of the proposed turbine locations. Locations that fell inside the predicted 35dB_{LA90} noise contour were considered for noise monitoring. The summary of the background noise data acquired indicates that these locations constitute a low noise environment at day and night times.

Table 11-13 of the EIAR sets out Noise Criteria Curves at various standardised 10m height wind speeds (m/s). Table 11-20 of the EIAR comprises a review of cumulative predicted turbine noise levels against relevant criteria. It shows potential exceedances of noise criteria at certain wind speeds for seven houses. Five of the houses are south of Aught Wind Farm. The applicant has submitted that the contribution of the proposed wind farm to the noise levels at each of these houses is not significant, being more than 10 dB below the existing noise level from other wind farms. It is reasonable, therefore, to determine that noise mitigation is not necessary for the impact on these houses. Predicted exceedances for the remaining two

houses are at night-time at certain wind speeds. Cumulative predicted turbine noise levels at these locations, once directional effects are taken into consideration, are presented in Tables 11-22 and 11-23 in the EIAR. For one of the houses (to the south of the proposed wind farm), all directional noise levels are shown to be within the daytime and night-time criteria. For the remaining house (to the south-west), all directional noise levels are shown to be within daytime criteria, while there remains a small number of exceedances of night-time criteria. The applicant proposes to programme those turbines causing the adverse noise impacts to run in reduced modes of operation in order to achieve noise criteria during certain periods and in specific wind conditions (termed 'curtailment'). This would result in the curtailment of the contribution from the proposed wind farm to be 10 dB below the noise level of all other wind turbines combined. The EIAR submits that a detailed curtailment matrix would be finalised as part of the detailed design for the selected turbine technology to achieve the noise criteria at each of the noise sensitive locations. The application of this curtailment would result in no remaining exceedances.

Having regard to the above, I note that the Board has no details contained in this application on the turbine technology which can reassure the Board, or indeed any of the occupants of the potential affected houses, that adverse noise impacts would be adequately addressed. In my opinion, there should be an obligation on the applicant to provide some clear understanding about the detailed curtailment strategy matrix in each of the relevant wind direction sectors in order that the Board can take an informed position on the likely effectiveness of such a strategy. It is not acceptable to provide such limited details on critical measures where there are likely to be evident adverse environmental impacts on neighbouring residents nor is it correct to leave such matters to a post-decision period. Further to this, I note that the applicant submits that, if permitted and constructed, a commissioning noise survey with the wind turbines operating normally (i.e. without curtailment) would be carried out and any exceedances of the planning conditions attributed to the wind farm would be indicated by implementing suitable curtailment. I submit to the Board once again that

seeking to come up with necessary mitigation (without details of same) to address potential significant environmental effects after a decision is made to permit the development is not desirable.

I note the EIAR also assessed noise with regard to the operation of site roads and the proposed substation. I acknowledge the significant separation distances between the site and established NSLs and consider the use and operation of these infrastructural components would have no notable adverse noise impact on the wider community.

I observe that the applicant acknowledges in Section 11.3.3 of the EIAR the effects of infrasound/low frequency noise and amplitude modulation and sets out mitigation in Section 11.5.5. I acknowledge that this can be a recurring issue of concern frequently for residents in the vicinity of an operating wind farm. The applicant submits that, if low frequency noise arises, an appropriate investigation should be undertaken. Reference is made to guidance on conducting such an investigation but no reference is made to what should be done in the event that this is a problem. Similarly, the applicant acknowledges the potential of amplitude modulation (AM) and it is proposed to employ an independent acoustic consultant to assess the level of AM in accordance with stated guidance should this arise. Once again, no reference is made to what would actually be done in the event there is a problem with amplitude modulation. It is regrettable that the Wind Energy Development Guidelines are silent on what can be a significant recurring noise concern.

Overall on operational noise, I note the predicted limited noise impact arising for noise sensitive locations in the area where the proposed development is intended to be sited. There are predicted adverse noise impacts for a small number of residential properties. I again acknowledge the low noise environment which houses in the general vicinity of this site experience. In light of the applicant seeking to address noise impacts by way of a curtailment strategy, details of which are effectively unknown or substantially limited, and to potentially be utilising alternative turbine technologies which would require updated noise assessment (refer to Section 11.5.5 of the EIAR) or assessment for further curtailment, I submit that there is some

degree of uncertainty and inadequacy in the information presented in the EIAR. Finally, I consider that it is particularly difficult to draw any reasonable conclusion on residual noise impacts when there remains the potential for low frequency noise and amplitude modulation, particularly where the applicant has not presented any measures to actually mitigate such impacts.

10.8.4 *Construction Noise*

I note the range of activities associated with the construction phase, including the development of a borrow pit, as well as the short-term nature of the construction period for the proposed development. While no national limits are set for construction noise, I am satisfied that the development would not be untypical of similar infrastructure projects and that the nuisance caused by construction activities related to the development would be short-term. Appropriate site management, guided by a Construction Environmental Management Plan and a Traffic Management Plan, would be pivotal in reducing nuisance and disturbance to the general public. Furthermore, construction periods could be controllable by way of attaching a condition with a grant of permission to limit days and times of construction, thus reducing potential adverse impact to residents nearby. Overall, construction noise impact would not be significant in my opinion.

10.8.5 *Decommissioning Phase*

I consider that it is reasonable to draw similar conclusions on noise for the decommissioning phase as to those drawn for the construction phase. This impact would be short-term and would not be significant in my opinion.

10.9. **Traffic Impact**

10.9.1 The applicant's EIAR assessed the effects of the proposed development at the construction, operational and decommissioning phases on roads and traffic. I note that, at the operational stage, the development would be unmanned and would be monitored remotely. Traffic volumes at that stage would be minimal, relating principally to maintenance, and would not cause any significant traffic concerns.

10.9.2 For the construction phase, there would be substantial increases in traffic volumes arising from the delivery of concrete, site preparation and ground works, delivery of large equipment, and worker traffic. The proposed entrance is at the north-east of the site and this would be the only entrance proposed to be used at the construction stage of the development to transport all materials. Therefore, access arrangements would be from the local road to the north of the site. A maximum of 80 workers would be employed at the site at the site preparation and groundworks stage, reducing to a maximum of 40 at the turbine construction stage. The route to the site for wind turbine deliveries would be from the Port of Derry via the A2, A515, Regional Roads R238 and R240, then turning onto a 400m section of new temporary link road which would link the R240 with Local Road L1731. The route would then proceed to the proposed site entrance at the north-east corner of the site. It is also noted that the proposed link road would be used for the purpose of all deliveries to the site, including standard HGVs.

10.9.3 The predicted increase in traffic volumes at the construction stage for the road network would include the following:

- It is estimated that 5,476 two-way HGV trips would be made to the site during the stage involving site preparation and groundworks, construction of turbine foundations, cabling, met mast foundations, substation and compound construction, and tree felling.
- During the 15 days when the concrete foundations are poured an estimated 75 concrete loads would be required for each turbine foundation delivered to the site over a 12-hour period.

- For the stage involving turbine delivery and construction, 114 trips would be made to and from the site by extended artics and 64 trips by conventional large articulated HGVs.

10.9.4 An assessment on the impact on link capacities in the area was undertaken for the various construction stages of the proposed development. It is noted the R238 to the south of Quigleys Point is the busiest road, with the link capacity forecast to operate at 89% for the do-nothing scenario. This is estimated to increase to a maximum of 93% during the 16 days that concrete foundations would be poured. All other roads leading to the site are forecast to operate well within link capacity.

10.9.5 A junction capacity assessment was undertaken for the R238/R240. All movements are forecast to operate well within the acceptable limit of 85%.

10.9.6 An abnormal load route assessment was undertaken for the proposed delivery route and a swept path analysis using Autotrack was undertaken to establish locations where vehicles would be accommodated and where remedial measures were required.

10.9.7 The short-term nature of most of the impacts on the road network is noted.

10.9.8 A range of mitigation measures are proposed in the EIAR. Large turbine components would be transported at night, specific traffic management measures would be employed, an on-site borrow pit would be developed, and the development would be subject to a Construction Environmental Management Plan (CEMP) and a Traffic Management Plan.

10.9.9 It is my submission to the Board that the proposed transportation of abnormal loads associated with turbine delivery would have potential effects on the existing regional and local road networks, requiring short sections of road widening, hedgerow works, etc. However, I am satisfied that the applicant has comprehensively assessed the proposed route, has identified where the potential impacts would likely result, and has drawn up a range of mitigation measures to reduce the significance of the potential impacts. With the implementation of such mitigation measures, I do not

envisage there would be any substantial long-term adverse impact for the road network affected. I acknowledge that there would be some short-term inconvenience to local road users during deliveries and general vehicular movements. I note that the national and regional roads affected are regularly used by HGV type traffic. A security or special contribution relating to protecting the road network affected by the turbine delivery routing could be applied to address any adverse physical impact on roads or bridge structures in the immediate term after any such impact. I consider that traffic management within settlements could likely facilitate delivery in an efficient manner to minimise local inconvenience. I do not accept that the delivery of abnormal loads would result in any significant environmental damage to established hedgerows, tree lines, etc. While the estimated 18 months construction period would result in substantial volumes of general construction-related traffic to and from the site (much of which would be larger vehicles), I consider this is not likely to result in any significant capacity issues for the regional and local routes affected. This traffic would evidently have potential structural effects on the local roads serving as the principal access to the site, as well as being a potential obstruction and nuisance to farmers, residents, and others using the local roads. This would be a short-term impact and any structural defects could be addressed by the requirement for a financial contribution to the planning authority by way of condition to rectify such impacts.

10.9.10 Regarding the grid connection, I acknowledge that the road works would generally occur in the road corridor beyond the site and would result in some short-term delays at local level, with some diversions and minor road closures. This would not result in any significant traffic concerns for the general public. The impacts on the observer Donal Doherty are acknowledged and these are addressed later in this assessment.

10.9.11 Finally, the traffic impacts at the decommissioning phase are anticipated to be less than those at the construction phase, with much of the infrastructure proposed to remain on site.

10.10 **Landscape and Visual Impact**

10.10.1 *Introduction*

The physical extent of the visual influence of the turbines, their impact on the natural landscape character, and the effects on amenity value of the area represent the principal issues of landscape and visual concern.

10.10.2 *Mitigation by Design*

I note the applicant's considerations on alternatives and on alternative turbine layout in particular. It is clear that there was a wide range of constraints relating to this site which in many ways led and directed where turbines could and could not be located on the site. The numbers of turbines and their layout likely maximise the potential of the lands that remain developable after the constraints were applied. I, however, note the changes to Donegal County Development Plan since the making of the application to the Board in relation to the variation of the Plan in 2022 with regard to Map 8.2.1 – Wind Energy.

10.10.3 *Donegal County Development Plan Wind Energy Strategy*

I acknowledge the changes to Donegal County Development Plan since the making of the application to the Board in relation to the variation of the Plan in 2022 with regard to Map 8.2.1 – Wind Energy. Based on this Map, the majority of the site is in an area that is 'Open to Consideration' for wind farm development. From the details provided in the applicant's response to the observations made to the Board, it may be noted that substantial sections of the site, particularly on its east side, are now designated 'Not Normally Permissible'. This includes the location for Turbine 2 and areas in the immediate vicinity of Turbines 1, 3 and 7. The applicant notes that the location of Turbine 2 is in a small pocketed area which is deemed of high landslide susceptibility.

10.10.4 *The Landscape Baseline*

Landscape Designation

The Board will note from Figures 12-1 and 12-2 of the EIAR that the level of visibility of the proposed turbines beyond the site from within areas designated within the Donegal County Development Plan designated as Areas of Especially High Scenic Amenity and Areas of High Scenic Amenity are significant. It is also noted from Figure 12-2 that 10 of the proposed turbines would be located within a designated 'Area of High Scenic Amenity'. The Plan notes that these areas have the capacity to absorb sensitively located development of scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape, subject to compliance with all other objectives and policies of the plan. Policy NH-P-7 of the Plan states that it is the policy to facilitate development of a nature, location and scale that allows the development to integrate within and reflect the character and amenity designation of the landscape. I do not consider that a development of the nature proposed, with large turbines up to a tip height of 173m, could be construed as being compatible with this policy, which seeks to protect the natural amenity of the landscape in this area. The proposed 10 turbines would be directly in conflict with this policy.

Further to the above, I specifically draw the attention of the Board to Figure 12-8 of the EIAR which shows the proposed development relative to existing and permitted wind farm development in the vicinity. It is particularly striking that the extensive number of other turbines associated with these other wind farm developments almost exclusively falls within the more general designation 'Areas of Moderate Scenic Amenity', in other words within the lowest category of amenity designation. This is a most significant observation when considering the landscape impact of the proposed development relative to the provisions of the Donegal County Development Plan. The landscape within which Turbines 1 to 10 are proposed to be developed has been identified and classified as high amenity for a purpose, requiring sensitivity with new development and development which can integrate with it. These turbines would fail to comply, being sited within an Area of High Scenic Amenity and being so prominent from similar areas and areas of higher amenity value designated Areas of Especially High Scenic Amenity.

Scenic Views

It is noted that there are extensive designated 'Scenic Views' in the wider area set out in the Donegal County Development Plan. It is acknowledged that many of the views within the Inishowen peninsula are not targeted towards the proposed wind farm site. It is, however, particularly notable that many views across Lough Swilly from the Fanad peninsula on its east side from the Wild Atlantic Way are towards the location of the proposed wind farm site. The upland areas of which the site forms a part are integral to the critical backdrop to views across the Lough. Policy NH-P-17 of the Development Plan seeks to preserve the views and prospects of special amenity value and interest. Policy NH-P-8 of the Plan seeks to safeguard the scenic context, cultural landscape significance, and recreational and environmental amenities of the county's coastline from inappropriate development. It is evident that the proposed development would intrude on the natural scenic context of the coastline in this area by impacting on designated scenic views.

Landscape Character Areas

I note that Donegal County Council has prepared a Landscape Character Assessment, which also includes Seascape and Settlement Character Assessments that were carried out as parallel processes and are viewed as integral to the Landscape Character Assessment. The purpose of the Landscape Character Assessment is stated to be to classify and describe the landscape to provide an evidence base of the landscape's components to assist in consistent decision making to achieve a balance between the protection, management and planning of the landscape in line with the National Landscape Strategy for Ireland 2015-2025.

I acknowledge that all of the proposed turbines would be located within Landscape Character Area 9 – Scalp Mountain. The Assessment notes that the LCA is characterised by widespread upland blanket bog and dominated by the imposing Scalp and Iskaheen mountains. It also states that substantial areas of commercial forestry extend throughout the area. At the time of the preparation of the Assessment there were 22 wind turbines noted as being located in two groupings in the west of the LCA. While there are no seascape units within the LCA, this upland mountainous area is acknowledged as being in the centre of the Inishowen peninsula and forming

a backdrop to views from two Seascape Character Areas: SCA 1 – Lough Foyle and SCA 6 – Lough Swilly. The Assessment further notes that Historic Landscape Characterisation identifies this LCA as a high point of upland bog that dominates all points on Inishowen. It is further noted that walks and trails throughout the area offer long uninterrupted views across the landscape. With regard to biodiversity, the Assessment states that the entire LCA falls within an SPA buffer and some of this is also within a SAC buffer. It also references that the rivers through this LCA are important biodiversity corridors, in particular the Crana river that flows west towards Buncrana. It is particularly notable that the Assessment determines that the ‘Forces for Change’ for this LCA are wind farm development, forestry, and poor river water body status.

It is reasonable to ascertain from the Assessment that this LCA has a distinct set of sensitivities and is recognised as being somewhat of a focal point in Inishowen, visible from many other Character Areas. Further to this, it is observed that the proposed wind farm development would occupy a very substantial component of the overall Scalp Mountain Landscape Character Area, running through its centre and then in a north-easterly direction. It is apparent that the physical impact of the proposed turbines, forming large, high, vertical structures, would constitute a substantial ‘Force for Change’, affecting the natural character of this Landscape Character Area. I note the permitted Aught Wind Farm to the east and Sorne Hill Wind Farm to the west of the site. It is evident that the site (much of which is designated an Area of High Scenic Amenity) provides relief within the LCA between these two wind farms. It is evident that the cumulative impact of wind farm development on the LCA would be very significant if the proposed development was to proceed. The character of the landscape would be radically altered, with the ‘Force for Change’ (i.e. wind farm development) distorting many of the qualities which are recognised as being of value for this LCA. It could reasonably be contended that it falls to a decision on landscape character impact between allowing more of the same that ultimately changes the landscape character and the virtues of the LCA, or to curtail the ‘Force for Change’ in the interest of protecting the remaining qualities of the LCA.

10.10.5 *Wind Energy Development Guidelines*

I again must acknowledge that the Wind Energy Development Guidelines, dating from 2006, remain in place as Section 28 Guidelines. The guidance set out therein on landscape and visual impact can reasonably be determined to be outdated, in my opinion, because of significantly smaller turbines which would have been prevalent at the time to inform the detail of such guidance. The Guidelines refer to six landscape character types to represent most situations as a basis for the Guidelines. They note that it is common that a wind energy development could be located in one landscape character type but would be visible from another. Importantly in the context of the proposed development, the Guidelines state that the entire visual unit should be taken into consideration. The applicant has sought to determine that the site of the proposed development aligns with the landscape character type 'Transitional Marginal Land', comprising both mountain moorland and farmland. However, it is apparent that the site of the proposed development for the turbines and other infrastructure is mountain moorland, being upland blanket bog on which forestry has been planted over much of it. It is not farmland. The site, therefore, correctly aligns with the Guidelines' landscape character type 'Mountain moorland', notwithstanding its forestry cover. The key characteristics of this landscape character type are stated in the Guidelines to be:

- Peaked, ridged or rolling mountains and upland with steep sides or gently formed valleys;
- Generally unenclosed;
- Landcover comprising blanket bog, a mottling of heather, wild grasses and some rush in wet flushes; and
- A landscape type of relative remoteness and often comprising pristine, unspoilt and remote landscapes.

The site stretches from a valley southwards to the higher slopes of Crocknacaddy and the lower slopes of Iskaheen Mountain. It is upland which is generally unenclosed, where the natural dominant landcover is blanket bog, and it forms part of a remote landscape.

I note that the Guidelines in relation to Mountain Moorland generally are not overly restrictive on turbine location, spatial extent, spacing, layout and height. However, the key issue of note for the proposed development when considering this landscape character type is the cumulative effect, given its proposed siting between Sorne Hill and Aught Wind Farms. The Guidelines note that the more varied and undulating an area is topographically, the greater its ability to absorb and screen wind energy developments. The Guidelines state that the aesthetic effect of wind energy developments in these landscapes is acceptable where each one is discrete, standing in isolation. It could be construed that this may otherwise suggest that the aesthetic effect of a wind farm development in mountain moorland may not be acceptable where it is not discrete and standing in isolation. It is first understood that there is not a great variation at this location topographically. It is also very clear that the proposed development seeks to fill the gap between the separate and discrete wind farms east and west of it and it is, unlike the other developments, primarily within a designated Area of High Scenic Amenity. It could not reasonably be seen as standing in isolation as it would be visually read as a 'filler' between two wind farms and adversely impacting on each of their stand-alone presentations to the wider environment.

10.10.6 *Visual Impact*

Zone of Theoretical Visibility (ZTV)

As part of the applicant's assessment of visual impact of the proposed wind farm development, the generation of a Zone of Theoretical Visibility, with a radius of 20km from the outermost proposed turbines, was devised. The ZTV represents the area over which the development would theoretically be seen within that 20km radius. It is apparent that the visibility of turbines would extend substantially beyond a 20km distance. The ZTV indicates broad areas where the visibility of the development is most likely to occur, how much is most likely to be visible, and the extent and pattern of visibility. It presents a 'bare ground' scenario, i.e. without screening structures or vegetation. I note that the applicant's ZTV shows the visibility of the proposed wind farm using the half blade height of the wind turbines as a point of reference and not the visibility of the hubs or blade tips of the turbines. The ZTV also indicates the

number of turbines that would potentially be visible to half blade. Figure 12-1 and Appendix 12-4 of the EIAR show the half blade ZTV.

Before considering the ZTV undertaken by the applicant, it must first be noted that the proposed turbines would be very large, very high vertical structures and, as a result, they would be visible, recognisable and distinctive over a vast geographical area. They would be distinctly larger and higher than other turbines in the area. Wind turbines up to 173m high to blade tip placed on upland areas would have a very significant degree of visibility over a very wide geographical area in the context of this location. It is not a question of from where they are hidden or from where they would be screened. A development of this nature would have direct impacts on the interpretation of the natural landscape because of its form, scale and degree of visibility. These direct impacts cannot be graded readily by alluding to intermittency or piecemeal reading of impacts in a landscape of this nature as a result of vegetation in a defined location, a bend on a road, the location of a hill, or some other minor intrusion on visibility over a short distance. A development of this scale should, in my opinion, always be read with regard to a true sense of impact, which is in the context of a location, such as within a high amenity area. Accepting its visibility in its context, one may then determine whether this visibility in this location is acceptable or not. These large turbines would be seen. They would be prominent. They would come into views from near and far. They would impact on the setting of mountain and lowland in a variety of amenity areas and landscape character areas. This is the reality of a development of this scale at this location.

Returning to the ZTV, it is unsurprising to note that the applicant's own modelling shows that the visibility of the turbines would be expansive. The proposed development would have a distinctive visual influence in all directions, notably within 10km of the site. It is clear that the proposed turbines would be highly visible from several designated coastal landscapes at further distances, namely on the east side of the Fanad peninsula, from Malin to the north, and east of Derry City. It is acknowledged that there would be a buffer between the 10km and 15m radius of the site on the Inishowen peninsula due to natural topography.

I submit that the applicant's ZTV ably demonstrates the prominence of the proposed development at this upland location. This impact is reinforced by the height, scale, and number of turbines placed at elevated locations and where often they would fail to retain mountainous or hilly backdrop and would frequently produce highly prominent development on the skyline. While again noting what the ZTV actually represents, i.e. a 'bare ground' scenario, one cannot but acknowledge that the conifer plantation on the site would do little to screen turbines of the height proposed.

Photomontages and Visibility from the Public Realm

I propose initially to offer considerations on the 13 photomontages presented as part of the applicant's EIAR which formed Volume 2. From the outset, I wish to state that the representation of the likely visual impact arising from views selected by the applicant forms a reasonable illustration of the visibility of the turbines when viewed from the specific points presented. They are representative of views from designated scenic views, settlements, recreational and tourist destinations, recreational routes, and transport routes. These views have been confirmed. The views presented may reasonably be determined to be location-specific and it is evident that viewpoints could have been selected elsewhere, such as other settlements, tourist destinations, etc., to indicate a varying degree of visibility.

It is acknowledged that the applicant has presented each of the photomontages with a blade length of 66m, a hub height of 107m, and tip height of 173m. For four of the photomontages representing short range views (VPs 01, 03, 09 and 12) and one longer range view (VP 08) two alternative turbine configurations were provided as the proposed development seeks a range of maximum and minimum turbine tip heights, hub heights and blade length.

Photomontage 1

View 1 is taken from a local road at a distance of approximately 3.5km south-west of proposed Turbine 12. Sorne Hill Wind Farm is prominent in the existing view. The cumulative impact of the proposed development with the existing wind farm, together

with other permitted wind farm development in the wider area, highlights the significant landscape character change that would result from the cumulative impact of wind farm development within the Scalp Mountain Landscape Character Area and beyond. It emphasises the significant visual impact the proposed turbines would have at a local level, being highly prominent in this view due to their proposed scale and proximity in the view. Furthermore, it demonstrates that there would not be any discernible way of determining how these wind farms are standing in isolation in this mountain moorland, with the proposed development reinforcing this amalgamation of turbines. Ultimately, it radically changes any understanding of an Area of High Scenic Amenity in which the proposed site is located when compared with other wind farm development located within the lower category of designated scenic amenity. It is also observed that the similarity of topography is a distinguishable feature of the upland on which existing, permitted and proposed turbines are sited, verifying the Wind Energy Guidelines finding that this less varied area undermines its ability to absorb and screen wind energy developments. It is notable that the applicant has determined that the effect of the proposed turbines is 'Not Significant' in this view, given the above observations and the fact that they would be the most prominent structures in the view.

Photomontage 2

View 2 is taken from a designated amenity area and wildlife reserve on Inch Island, approximately 10.5km south-west of Turbine 12. There are no turbines associated with any wind farm development in this view. Asdevlin Hill is a prominent feature in the view. The montage shows that the rotating blade tips of six of the proposed turbines would come into the view to the left of Asdevlin Hill. The applicant has determined that the significance of effect would be 'Imperceptible'. Acknowledging the distance of this view location from the site and the understanding of the term 'Imperceptible', the proposed rotating turbines in this view would be 'Perceptible'. From this amenity location, turbines would be introduced for the first time in views across the inlet. This is worthy of note. I do not, however, determine that the proposed development would have any significant adverse impacts on the view but rather acknowledge the perceptible impact the proposed development clearly would have in fact.

Photomontage 3

View 3 is taken from a local road approximately 2.5km north-east of proposed Turbine 4. Scalp Mountain would have been the most prominent feature in this view and while remaining prominent, the turbines of Sorne Hill Wind Farm now dominate the view, with Meenkeeragh Wind Farm turbines expanding the linear pattern of wind farm development westwards. Two turbines appearing to be from the existing Flugland Hill Wind Farm are on the extreme left side of the view. When the permitted wind farm turbines of Aught Wind Farm are introduced they appear as extending the linear development of wind turbines on the left side of the view. When the turbines of the proposed wind farm are introduced they effectively fill the gap, linking Sorne Hill with Aught. Many appear as skyline intrusions. Overall, the proposed turbines remove any possibility of the wind farms across this ridge being in any manner discernibly separate from each other. It is the proposed development that does this. This part of Scalp Mountain Local Character Area in which the site is located, and which is also a designated 'Area of High Scenic Amenity', is distorted by the proposed development, which effectively removes the qualitative view of the distinctive Scalp Mountain. Thus, it is apparent that the proposed turbines adversely affect features of distinction within the Local Character Area, have a damaging effect on a designated Area of High Scenic Amenity, and fill a gap to ensure that there is an expansive linear visual presentation along a lengthy ridge such that no wind farm stands in isolation. The proposed development is a strong and effective 'Force for Change' when one has regard to Donegal's Landscape Character Assessment and it is not positive for the protection of the high amenity value of this landscape. The applicant has determined in its assessment that the effect of the proposed development would be 'Not Significant'. Suffice to indicate that my considerations differ to that of the applicant based on the above observations. Indeed, I would stress that the visual effect of the proposed development in this view, and expanding to the wider area in the vicinity, is very much 'Significant'.

Photomontage 4

View 4 is a highly scenic view from Regional Road R268 on the east side of Fanad peninsula across Lough Swilly at a distance of almost 13km from proposed Turbine 12. It is a panoramic view eastwards on a stretch of road where views are designated as 'Scenic Views' in the Donegal County Development Plan. A number of wind farms are visible in the view, with Sorne Hill appearing the most prominent in the centre. When the proposed development is added it presents as a further accumulation of turbines in the centre of the view and like the other turbines is not discernible as a separate wind farm from any of the others in the centre of the view. Its effect is cumulative, intensifying the intrusive impact of high, prominent structures in an otherwise distinctive qualitative view focusing on the natural landscape across Lough Swilly. With the increased collection of turbines at this location comes an increased prominence of wind farm development in the view such that the rotating turbines become a combined feature in this expansive view that draws the eye of the viewer. Thus, the cumulative effect requires to be acknowledged as important in this view. The applicant has determined that the effect on this view to be 'Slight'. Its consideration on 'Cumulative Effects' has regard to an already dense cluster of existing and proposed turbines and notes that there are already multiple instances of visual stacking. I submit that such a conclusion fails to recognise what effects the addition of the proposed turbines would actually have, namely increasing the prominence of turbines in a highly scenic view which is clearly so determined because of the quality of the view of the natural features of Lough Swilly and beyond. It is not because the wind turbines are understood to be a valued part of any designated scenic view.

Photomontage 5

View 5 is again from the R268 on the east side of Fanad peninsula across Lough Swilly but further north at a distance of approximately 16km from proposed Turbine 12. This again is a panoramic view eastwards on a stretch of road where views are designated as 'Scenic Views' in the Donegal County Development Plan. The quality of the view is clearly served by the natural features of Lough Swilly, the low slopes in the medium view on the other side of the Lough and the distinctive uplands behind.

There is a spread of turbines visible in the centre of the view which undermine the value of the natural uplands, with Sorne Hill Wind Farm being most prominent. It is evident that the permitted Aught Wind Farm would add to the linear spread of turbines across the ridge in the centre of the view. The addition of the proposed development has a high visual impact on the view as the turbines proceed down the slope in the direction of Lough Swilly, forming the most prominent turbines in the centre of the view. The distortion by and prominence of turbines eroding the quality of the wider natural view across Lough Swilly are evident. This view once again reinforces the significance of the cumulative effect of the proposed development and also highlights the proposed development's own distinctive significant effect on views across Lough Swilly from the Fanad peninsula, notwithstanding the proposed development being some 16km and more from this viewpoint. The visual effect is determined by the applicant to be 'Slight'. It is reasonable to determine that the cumulative effect of the visible turbines would be exacerbated in this view and the proposed high turbines would be distinctive and prominent in this view such that the effect on views of the natural landscape, which are designated as scenic views, could not be determined to be slight in the meaning of the word, i.e. very small in degree.

Photomontage 6

View 6 is taken from the A2 north of Greysteel and east of Derry City at a distance of 16km south-east of proposed Turbine 9. The quality of this view is served by the generally undeveloped lowlands in the foreground, the expanse of Lough Foyle, and the rolling uplands on the other side of the Lough. Four turbines from Glackmore and Three Trees Wind Farms are in the centre of the view and a notable cumulative visual impact and linear spread of turbines arise with the introduction of the permitted Aught Wind Farm. The proposed wind farm, while marginally discernible excepting proposed Turbine 9, clearly contributes to the linear spread of turbines westwards along the upland ridge. Overall, the array of turbines would be understood as a single wind farm in the centre of this view. Given the distance and the very marginal visibility of the proposed turbines, with the exception of proposed Turbine 9, the impact on the view could not reasonably be viewed as significant. I note that the applicant has determined the visual effect to be 'Imperceptible'. I consider that

proposed Turbine 9 is perceptible in this photomontage as it is clearly present, as are parts of blades of a couple of the other proposed turbines.

Photomontage 7

View 7 is taken further east of View 6 and is again from the A2 at a viewing point at a distance of almost 18km from proposed Turbine 1. The similarity of the character of this view with that of View 6 is apparent. It is acknowledged that the proposed wind farm would be at a greater distance in the view and thus with distance comes a degree of reduced visibility in this instance. The conclusions drawn on Photomontage 6 can reasonably be replicated in relation to Photomontage 7.

Photomontage 8

View 8 is a view eastwards from a local road at the northern side of Buncrana at a distance of 7.5km west of proposed Turbine 12. Sorne Hill Wind Farm is a distinctive feature in this view, presenting in a linear pattern along the ridgeline beyond lower hills to the north of the town. Scalp Mountain is prominent on the right side of the view. The introduction of other permitted wind farms, including Aught Wind Farm, notably expands the linear impact of turbines across the ridge. The proposed development evidently adds to the proliferation of turbines and their significance in the view by adding to this cumulative and linear impact, coming forward of Aught Wind Farm turbines. Its impact would be greater understood as one progresses down the hill and views north-eastwards allow more of the turbines to potentially become visible. Once again, it is this cumulative and linear impact that results in no wind farm presenting as a standalone development, presenting as a large linear expanse of turbines over a significant upland area. The applicant has determined the effect on the view to be 'Slight'. The cumulative linear effect of the proposed development appears to be not recognised in the applicant's assessment of visual impact.

Photomontage 9

View 9 is from a local road to the north / north-west of the site at a distance of approximately 1.26km north-west of proposed Turbine 5. The patchwork of coniferous plantations across and in the vicinity of the site are clearly identifiable across the ridge and on the slope, as is the presence of upland blanket bog sloping down to the Crana River. Sorne Hill Wind Farm is prominent on the right side of the view and two other turbines from Three Trees / Glackmore Wind Farms are visible in the distance on the left side. The introduction of the permitted Aught Wind Farm appears as a significant expansion of wind farm development on the left side of the view. The clear separation from Sorne Hill ensures the wind farms are understood as separate developments. With the introduction of the proposed development the gap is filled and the totality of wind turbines reads as one complex of turbines. The cumulative effect is highly significant. One could not reasonably conclude that each wind farm is discrete, standing in isolation in this mountain moorland. Being higher turbines, more central in the view, with some turbines progressing down the slope, the proposed turbines are the most prominent features in the view. The applicant has determined the effect to be 'Moderate' while acknowledging the magnitude of change to be 'High'. The very significant cumulative effect cannot go unnoticed in this view, eliminating any understanding of separate wind farm developments along the ridgeline.

Photomontage 10

View 10 is just over 17km north of proposed Turbine 4 from the village of Malin on Regional Road R242. It is a panoramic view from Malin Bridge across Trawbrega Bay with the eye being drawn to the rugged uplands at the rear framing the view. There is a grouping of wind turbines from several wind farms which are discernible in the centre of the existing view. With the introduction of the permitted Carrowglen and Aught Wind Farms there is a significant cumulative increase in turbines visible in the view, with the former wind farm being significantly more prominent. The proposed development adds to the linear presentation of turbines on the approach to the mountain on the right side of the existing grouping of turbines. Thus, it does contribute to the spread of what appears as a lengthy line of turbines across the

uplands in the view. It is acknowledged that the proposed turbines would be in excess of 17km from the viewpoint and that visibility would be limited. However, the cumulative effect of permitted wind farm development is evident on the quality of the view of the natural landscape. It is being greatly distorted as turbines line out along the ridgelines and the proposed development would make its contribution to this. The applicant's conclusion that the effect would be 'Imperceptible' is not correct as proposed Turbines 1 and 2 clearly are perceptible and add to the linear spread of turbines in the view.

Photomontage 11

View 11 is a view eastwards taken from an inland area on the Fanad peninsula from a scenic view on the R247 regional road at a distance of 17.5km from the nearest proposed turbine. The view is characterised by the upland blanket bog in the foreground, glimpses of Lough Swilly and the expansive uplands to the rear which frame the view. The natural view is impacted by two groupings of turbines, on the left side by Beam Hill and Meenaward Wind Farms and in the centre by several wind farms, including Sorne Hill. In each grouping, one cannot discern one wind farm from the other. This cumulative effect is increased with the introduction of the permitted Aught Wind Farm. The quality of the view is rapidly becoming greatly affected as the quality of the natural landscape becomes distorted and eroded by the increased physical presence of more turbines. The proposed turbines cause greater distortion as the turbines present as being closer to the viewer. Furthermore, there is no possibility of reading any of the wind farms as separate developments. The effects on the designated Area of High Scenic Amenity are clear in the final montage, demonstrating a cumulative effect which can only be described as significant, notwithstanding a distance of more than 17km. It is apparent that the designated 'Scenic View' is rapidly being eroded, given that it would be understood that it is the quality of the natural landscape which is intended to be appreciated in the view and not a proliferation of man-made turbines. The applicant has determined the effect to be 'Slight'. There appears to be no recognition of the true cumulative effect of wind farm development and the contribution the proposed development makes to the distortion of the natural landscape, which is the integral component of the designated Scenic View in this instance.

Photomontage 12

View 12 is taken from a local road just under 2.5km west of proposed Turbine 12. Coniferous forestry and blanket bog are prominent in the foreground, with ridgelines behind being dominated on the left side of the view by Sorne Hill Wind Farm. The blades of two turbines from other wind farm development are visible in the distance in the middle of the view. With the introduction of the permitted Aught Wind Farm, there is a significant cumulative increase in turbines in the centre of the view and there is a notable progression of turbines towards the turbines of Sorne Hill on the left side of the view. The proposed development completely fills the gap between Aught Wind Farm and Sorne Hill Wind Farm when introduced into the view. At a local level, this cumulative effect is very significant with the landscape change clear as the expanse of turbines completely dominates the view. Wind farm development in this view is understood as a line of prominent structures extending across the full width of the ridgeline in the view, with no natural upland backdrop as large numbers of turbines break the skyline. No wind farm is discernible from another. The designated Area of High Scenic Amenity is completely lost as turbines become the dominant feature in the landscape. The impact in this instance can truly be understood as a 'Force for Change'. One is clearly losing the relevance of the natural landscape in this view. The applicant, when considering the cumulative effects, considers that there is a visual separation between the proposed and permitted turbines. The applicant concludes that the effect would be 'Slight'. The cumulative effect, the complete filling of the gap between turbines to the left and turbines to the right, the prominence of the proposed turbines, and the complete inability to separate one wind farm from another is not a 'Slight' effect, i.e. very small in degree. The contribution of the proposed development to the cumulative effect on the landscape character and visual impact of wind farm development is significant not 'Slight'.

Photomontage 13

View 13 is taken from a housing estate in Derry City just over 14km south of proposed Turbine 15. Housing blocks most of the views of the uplands to the rear. One existing turbine is just about visible on a ridgeline beside the branch of a tree

right of centre in the view. The permitted Aught Wind Farm presents as an extension left of that turbine and its turbines become prominent features dominating the skyline in the distance over the rooftops of houses. The proposed development has little impact, with the blades of one turbine being visible and presenting as a further extension to the left of Aught Wind Farm. The proposed development makes no significant contribution to landscape change in the view but it is clear that the one turbine makes a cumulative contribution on the ridgeline. The applicant has determined that the effect would be 'Imperceptible'. The proposed development would be noticeable. Therefore, it could not be deemed to be imperceptible.

Conclusions on Photomontages

Landscape and visual impact assessment should not be couched in nuanced language. In my opinion, the assessment must read as meaningful and be presented in easily understood language. To this end it is observed that large turbines will have large landscape and visual impacts. This is reality. Just because one admits to this it does not necessarily mean that a proposed wind farm development would be automatically refused for reasons relating to adverse landscape and visual impacts. If this was the case, then no wind farm development would ever be permitted.

In considering the applicant's photomontages, I must acknowledge that the sensitivity of the landscape from which views have frequently been taken, and the consequences and impacts for the value and quality of views from coastal locations and important tourist and scenic roads in particular, appear to be generally ignored in the applicant's assessment. None more so when regard is had to the applicant's considerations of effects on designated Scenic Views. Furthermore, little if any consideration is given over to the effects on the designated Area of High Scenic Amenity in which most of the turbines are located and the effects on the Scalp Mountain Landscape Character Area, with particular regard to the 'Force for Change' which the proposal would significantly be for the landscape. It is obvious that development of the nature and scale proposed clearly impacts on the quality of

views and experience of the landscape gained from within such areas. In the main, such impacts may be seen by many as being adverse and by many others as having a positive or neutral effect. What must be recognised is that the natural landscape (which is the most valued component of the scenic landscape), and views and experience of it, are clearly distorted, frequently to a greater degree by development of the nature proposed when compared to other new development being introduced in the distance which more often would not be of such significant scale, height and consequent high level of visibility.

I submit that the views that may be termed 'local' would result in profound landscape and visual change when perceived by neighbouring properties and when travelling along the local roads, as evidenced by Photomontages 1, 3, 9 and 12. This is expected, given the scale, height and proximity of the proposed turbines in the views. I cannot concur with the applicant's conclusions on effects that they are in some way 'Not Significant' or 'Slight' in any reasonable meaning of these words.

I note that the median range view (between 5 and 10km), which View 8 represents, is deemed by the applicant to have an effect that is 'Slight'. The cumulative linear effect of the proposed development appears to have been missed entirely in the applicant's assessment. My considered opinion on this view greatly varies from the applicant's findings.

Regarding the more distant views (greater than 10km from the wind farm – Views 2, 4, 5, 6, 7, 10, 11, and 13), it is noted that the frequent prominence and very significant cumulative impact of the proposed development, along with its substantial contribution to extensive linear development of turbines as skyline development along ridgelines, cannot be ignored. Many of these views are highly scenic views that are acknowledged as such and which are clearly determined to be so due to the quality of the natural landscape in the available views. To suggest that the proposed development would have a positive or neutral impact on the quality of the natural landscape would be incorrect. To suggest the effects on such views would be 'Imperceptible' or 'Slight' appears to not offer due regard to an understanding of what

the quality of a natural landscape is and certainly indicates little understanding of what protecting natural landscapes of high scenic amenity value means.

The need to protect the highest quality landscapes from such adverse impacts should be sought if proper planning is to be followed. The saturation and distortion of the natural landscape at the location of the proposed development by wind farm development is rapidly becoming a reality. The proposed development, with most of the turbines primarily sited in an Area of High Scenic Amenity and cumulatively contributing to the linear spread of turbines on the uplands in the centre of the peninsula in a significant manner, introduces a wholly different debate at a wholly different scale. Ultimately, when one is considering landscape and visual impact, it is a stark choice between accepting a true adverse physical change to the landscape character of this area in permitting the development or protecting the natural qualities of the landscape into the future. While it may be argued that the former could be seen to be sustainable because it is a wind farm development, the clear negative impact on the high quality natural landscape cannot be avoided. One cannot keep ignoring the cumulative effect of wind farm developments on such sensitive landscapes. It is not sustainable to downgrade or dismiss the cumulative landscape and visual effects of the proposed development.

10.10.7 Conclusions on Landscape and Visual Impact

I submit to the Board that there is no doubt that the proposed development would have a significant landscape and visual impact, both locally and over greater distances from houses, roads, scenic routes, and tourism and amenity locations. Furthermore, it would intrude on designated Scenic Views and it would have a clear, unambiguous, adverse physical landscape and visual impact on a designated Area of High Scenic Amenity. It would clearly become a 'Force for Change' within the Scalp Mountain Landscape Character Area. It would have significant cumulative effects when viewed from outside of the Landscape Character Area. The height and scale of the proposed turbines would ensure that the development would be highly visible. This visibility cannot be considered to be 'Not Significant', 'Imperceptible' or even 'Moderate' as the applicant seeks to present. Such terminology is simply

misplaced when one is considering the height, scale and siting of the proposed turbines and their landscape and visual impact. The applicant's photomontages openly demonstrate how substantial the landscape and visual impacts would be. The prominence of a development of this scale emphasises the frequently exposed nature of the natural landscape and how there are expansive views throughout much of this area. The prominence and skyline nature of a development of this scale is obvious and should be openly acknowledged. The impact of this development would change the understanding of the landscape in many instances. Incongruity with the natural landscape should be openly acknowledged and the interpretation should not be clouded by presenting 'mitigation factors' that simply do not physically mitigate and cannot physically mitigate a development of this scale.

The considerations of the cumulative impact of the proposed turbines merit serious consideration. Wind farm development in this part of Donegal is very extensive. This proposal significantly adds to the extent of turbines on ridgelines in this area. This proposal also clearly expands the linear spread of turbines, affecting views from scenic, tourist and amenity locations and routes that are clearly recognised as being of importance and value. The natural landscape is the principal tourism and amenity asset of this location. This landscape has been greatly affected by wind farm development to date and it is a fact that the proposed development would add further in a substantial manner to this. The proposed development does not have an inconsequential landscape or visual impact.

Finally, when due consideration is given to the provisions of Donegal County Development Plan, it can reasonably be concluded that the proposed development:

- fails to protect and conserve the character, quality and value of the landscape, including consideration of the scenic amenity designations of the Plan, the preservation of views and prospects, and the amenities of places and features of natural interest and, thus, conflicts with Objective NH-O-05 of the Plan;
- is not of a nature, location and scale that allows the development to integrate within and reflect the character and amenity designation of the High Scenic Amenity landscape and, therefore, conflicts with Policy NH-P-7 of the Plan;

- does not safeguard the local landscape and natural environment by ensuring the new development does not detrimentally impact on the character, integrity, distinctiveness or scenic value of the area and, thus, is contrary to Policy NH-P-9 of the Plan;
- does not protect and conserve the landscape, having regard to the nature of the proposed development and the degree to which it can be accommodated into the receiving landscape and with consideration of its scenic amenity status and scenic views in the wider area and, therefore, conflicts with Policy NH-P-13 of the Plan;
- fails to safeguard prominent skylines and ridgelines from inappropriate development contrary to Policy NH-P-15; and
- fails to preserve the views and prospects of special amenity value and interest in the wider area, undermining the natural integrity of views and intruding significantly on such views, contrary to Policy NH-P-17 of the Plan.

As a result, the landscape and visual impact of the proposed development ensures that this development would conflict in a significant manner with policies and objectives of the current Donegal County Development Plan.

10.11 **The Grid Connection**

10.11.1 Details of the location and layout, the construction methodologies, and proposed water crossing arrangements for the grid connection have each been addressed in the application. The intended connection of the proposed wind farm to the existing Trillick substation appears to be a reasonable objective in principle. The local roads along which it is intended to lay the cable are extremely narrow and the construction stage would lead to diversions and delays for local traffic, albeit this would be over a short construction period. The Board will note my considerations relating to the observer Donal Doherty's landholding below. As with all such proposals, it is understood that the final details and specifications for the grid connection would require to be confirmed by ESB / EirGrid.

10.11.2 I note that the various sections of the EIAR have addressed the provision of the grid connection. In light of my considerations on the management of peat and other waste materials on the site and on site drainage, I must acknowledge that, being an integral part of the overall infrastructure associated with the proposed wind farm, it is not possible to readily separate the excavation and undergrounding of cables within the site, along with the provision of new internal roads and development of new roads under which they would be laid, from the significant potential adverse impacts that could result from a failure and/or inadequacy of site drainage provisions and the management of spoil. It is again observed that the accommodation of undergrounding of cables throughout the site under new and extended internal access roads would occur on a peat-dominated holding. Given there remains significant environmental risk arising from the proposed construction of the wind farm development, one cannot dismiss the contribution the on-site grid connections works could make to any malfunctioning of the proposed drainage and spoil management measures.

10.12 **Impact on Donal Doherty's Landholding**

10.12.1 I note the location of Donal Doherty's farm holding and I have inspected the access to this holding. The local road leading to the lands (L7241-2) is a very narrow, poorly aligned and very poorly surfaced road. It is a laneway for substantial lengths. It cannot accommodate two-way vehicular traffic. The southern part of the proposed wind farm site has frontage onto this road. This road is intended to be used as part of the grid connection route which would lead to Trillick substation. It is understood from the application that this road would not be used as a delivery route during the construction period. According to Section 14.1.2.4 of the applicant's EIAR, the proposed site entrance at the north-east end of the site would be the one entrance to transport everything, including turbine components, materials and equipment, as well as staff. Notwithstanding the latter, I acknowledge that the minor local road serving the observer's property could potentially be used as an alternative access route by construction workers into the site. I submit that this should not be permitted as such traffic would undermine the carrying capacity of the road to accommodate those who

need to use it for access to their properties. In the event of any grant of permission for the wind farm, a condition prohibiting the use of the local road as an access for construction workers into the site should be attached.

10.12.2 Noting that the observer farms these lands and observing farm work occurring on the holding at the time of site inspection, the necessity for maintaining access to this land is clearly understood. This cannot be achieved without specific provisions being made for the observer on an ongoing basis during construction of the proposed wind farm and its associated grid connection. The observer seeks the provision of laybys along the road and requests that a condition of planning permission would provide him with unlimited access day and night through the wind farm site in the event that the local road is closed during the construction period.

10.12.3 I note the construction works from the applicant's EIAR and the works on this local road in particular. Section 14.1.6.6 of the EIAR indicates that temporary road closures would be required as local roads are not wide enough to accommodate both the construction works associated with the grid connection and one live lane of traffic. Local road closures lasting 25 days would be required. Noting the impact on the L7241-2, the EIAR states that trips may be re-routed on a temporary basis through the wind farm site and onto the public road network via the main development access junction. In addition to these direct effects on the local road, I note that the proposed development would include the replacement of the bridge deck crossing the Owenkillev River at Tullydish Upper. This would be in the vicinity of the junction of the L-7241-2 and the L-1781-3 and could have further impacts on access to the observer's landholding as the local road at this location would be closed for up to a further 12 weeks.

10.12.4 While acknowledging the above, I note the applicant's response to this observation. It appears from this response that continued access is proposed to be provided. The observer appears satisfied with this response. In the event any clarity is required, a suitable condition attached with any grant of planning permission could address this issue.

11.0 Environmental Impact Assessment

11.1. Introduction

11.1.1 This application falls under Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment (i.e. the 2014 EIA Directive). I have examined the information presented by the applicant, including the EIAR, and the submissions made during the course of the appeal. I have considered whether the information contained in the EIAR and the supplementary information provided by the applicant to date in the application process adequately identifies and describes the direct and indirect effects of the proposed development on the environment and complies with relevant legislative provisions.

11.1.2 I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality to allow consideration as to whether the information contained in the EIAR and any supplementary information provided by the applicant adequately identifies and describes the direct, indirect and cumulative effects of the proposed development and complies with article 94 of the Planning and Development Regulations 2000, as amended.

11.2. Alternatives

11.2.1 I first acknowledge that the applicant's consideration of alternatives included a 'Do Nothing' option, alternative site locations, alternative renewable energy technologies (i.e. solar), alternative turbine layouts and development design (inclusive of substation and grid connection), alternative turbine delivery options, and alternative mitigation measures. It was an extensive examination of alternatives in my opinion. The main reasons for selecting the chosen option as opposed to the range of alternatives were provided.

11.2.2 I note the involvement of Coillte as co-development partners and the consideration of sites in Counties Clare, Leitrim/Sligo, Cork and Kilkenny. It is reasonable to observe that land availability and suitability of that land must be regarded as a relevant contributor in considering, in a practical manner, a proposal and other projects which

may reasonably be pursued as alternatives. It is, therefore, reasonable that the Coillte landbank was reviewed to determine alternative site locations. Accessibility to the national grid is also a significant consideration. The potential options to provide connectivity to the grid have been given. This again is reasonable. Any potential constraints with the grid are matters which would be addressed elsewhere and are beyond the control of the applicant. Clearly, the project can only be viable if any such constraints are addressed. At this stage, the applicant can only reasonably demonstrate the ability to provide for the grid connection.

11.2.3 In conclusion, it is my submission to the Board that the applicant has undertaken consideration of reasonable alternatives in the planning application. I cannot conclude that this application fails to comply with the requirements of the EIA Directive in relation to alternatives.

11.3. **Population and Human Health**

11.3.1 The applicant examined population, human health, employment and economic activity, land use, residential amenity, community facilities and services, tourism, property values, shadow flicker, and health and safety. I have examined the issues relating to shadow flicker, noise, and traffic in my main planning assessment and do not propose to repeat in detail my considerations on these issues. The principal matters relating to health and safety have been considered in the context of site drainage and spoil management and the impact on tourism has been considered by way of the assessment of landscape and visual effects.

11.3.2 My general considerations otherwise are as follows:

- The site of the proposed development is located in a remote, rural, upland area. There are five occupied houses within one kilometre of any proposed wind turbine location. There is a minimum separation distance of 740m from the nearest house to Turbine 12. Residential development is generally sparse in the immediate vicinity of the site.
- The site is separate from established urban settlements in this area, with the town of Buncrana being approximately 6km to the west, being the nearest main settlement providing community and social services, amenities and

access to public transport. The village of Quigley's Point is located approximately 6km to the east and Muff is located approximately 7km to the south-east.

- The principal land use within the main body of the site is commercial forestry. The principal land use surrounding the forestry is farmland. The forestry land use for the site will remain. The land uses along the proposed grid connection comprise forestry, agriculture and public roads.
- The applicant's EIAR placed a significant emphasis on tourism reports and surveys from Ireland and Scotland in support of its considerations that there would not be a significant impact on tourism and to demonstrate a wide acceptance of wind farm development by the public. In my opinion, most of these surveys are at best dated and could not, in light of the more modern form and scale of wind farm development, be seen to be surveys which can be relied upon as reasonably representative views at this time. It is also observed that the findings presented in the more recent surveys relate to very generalised opinions on wind farm development in principle.
- I note the applicant's emphasis on human health impact studies which seeks to inform the Board that there is no published credible scientific evidence to positively link wind turbines with adverse health effects. I note that there is an increasing number of studies that seek to counter such a conclusion. I consider that it is reasonable to determine that there are conflicting studies on health implications from wind turbines, notably noise effects. This issue is addressed earlier in my assessment of noise impacts.
- On the issue of property values, I note that the EIAR refers to much dated US studies and to a Scottish study titled "*Impact of Wind Turbines on House Prices in Scotland*" (2016). The latter found no evidence of a consistent negative effect on house prices, with results varying across areas. The EIAR also submits that, although there have been no empirical studies carried out in Ireland, it is a reasonable assumption that the provision of a wind farm at the proposed location would not impact on property values in the area. Clearly, there are no studies done in Ireland which determine that the siting of a wind farm does or does not affect property values. I consider that it is difficult to

accept that, if a wind farm of the scale and height proposed in this application is located near a residential property, one could reasonably conclude that the siting of such large turbines would either enhance the value of the property or, indeed, have a neutral effect. It is my opinion that the proposed turbines are likely to have significant adverse impacts on the amenities of their closest neighbours in terms of landscape and visual impact and potential noise and shadow flicker. I cannot see how these impacts would not adversely affect a property value. These observations are based on my experience and understanding of potential environmental impacts and their consequences.

- I note the details provided in the EIAR on shadow flicker. This issue has been addressed earlier.
- The construction phase of the proposed development is not likely to have significant adverse impacts on the amenity of residents or the functioning of farms in the area. The concerns of the observer Donal Doherty are understood and measures to address farming concerns are proposed to be appropriately applied. This construction stage would be subject to well-defined management and work practices, including delivery timing, working hours restrictions, traffic management, dust and noise controls, etc. This stage of the development would have temporary, short-term impacts in terms of any disturbance or nuisance arising.
- Health and safety concerns for workers at the construction phase are matters alluded to earlier in this assessment with regard to spoil management and site drainage failures. I acknowledge the site controls and work practices proposed to be put in place. I note the health and safety mitigation measures proposed. Concerns relating to the construction of the proposed development and the associated site drainage and spoil handling and management, leading to concerns for the wider environment, are addressed in other sections of this assessment.
- The proposed development would provide up to 120 jobs during the construction, operation and maintenance of the proposed development. The

number of jobs relating to maintenance and control at the operation stage would likely be no more than two. The construction phase would last for between 12 and 18 months. I note that construction workers and materials would be sourced locally where possible.

- At the operational phase, the applicant proposes a wide range of mitigation, including measures relating to maintenance of the development, shadow flicker controls, noise curtailment, and interference with communication systems.

11.3.3 It is reasonable to determine that the principal environmental impacts applicable to population and human health are those relating to peat slippage, shadow flicker, noise, health and safety, pollution, traffic, and landscape and visual amenity. These have been assessed earlier in my planning assessment.

11.4. **Biodiversity**

11.4.1 Chapter 6 of the applicant's EIAR considered the impact of the proposed development on biodiversity, flora and fauna. Chapter 7 considered impacts on avian receptors. The EIAR addressed the baseline ecological conditions and receptor evaluation, an assessment of the effects at the different stages of the development, proposed mitigation, and an assessment of residual effects.

11.4.2 My considerations on biodiversity, flora and fauna are as follows:

- The site is not on, in or in immediate proximity to any European site. I refer the Board to the section of my report on Appropriate Assessment.
- A range of habitats have been identified at the site. The site is primarily made up of conifer plantation, with all proposed turbines located within forestry excepting proposed Turbines 10 and 12. Much of this forestry was planted on peatland. There are small areas of upland blanket bog, notably in the vicinity of Turbines 10 and 12. Cutover bog is also present in some peripheral sections of the main site. Poor fen and flush are also evident within the upper

blanket bog. Small areas of wet grassland have been identified between blocks of forestry plantation. There are a number of watercourses within the site draining to the Crana River to the north and the Mill River to the south-west.

- I note that the proposed grid connection routes would traverse many of the habitats found within the main site itself.
- No botanical species listed under the Flora (Protection) Order, the EU Habitats Directive or in the Irish Red Data books were recorded on the site.
- No invasive species were recorded within the site, along the grid connection route, or the turbine delivery works area.
- Fauna-related findings were recorded in a range of site surveys. No badger setts were recorded within the study area boundary. Signs of otter were recorded in watercourses that drain the study area boundary, notably at the Owenkillev River along the grid connection route, but not at watercourses within the site. Signs of the presence of red squirrel, common frog, smooth newt, Irish hare, pine marten, and fox were also recorded. Two buildings were observed to be used by bats. Common pipistrelle, Myotis, soprano pipistrelle, Leisler's bat, and Brown long-eared bat were recorded.
- The downstream watercourses are acknowledged as likely to provide suitable habitat for Atlantic salmon, brown trout, European eel and Lamprey.
- At the construction stage, the following is submitted:
 - o The proposed development would include the crossing of waterbodies within the site. There would be four clear-span watercourse crossings. There would also be watercourse crossings along the internal road network, the proposed delivery route and along the grid connection route. There is potential for construction activity runoff of silt, nutrients and other pollutants into these watercourses. The Board will note my earlier considerations under the headings 'Management of Waste Materials' and 'Site Drainage' and the applicant's proposed drainage management plan.

- The proposed development would result in the direct loss of peatland habitat, comprising upland blanket bog and cutover bog as a result of proposed Turbine 12, Turbine 10, sections of the new access road between Turbines 10 and 14, between Turbines 13 and 14, and along a new access road between Turbines 1 and 9. The Board will again note my considerations on the potential for significant effects arising from the construction works and the handling and management of spoil.
- 80.5 hectares of commercial forestry would be felled to accommodate the wind farm development.
- The drainage effects have potential significant effects for aquatic species in the waterbodies on and downstream of the site.
- At the operational stage, the following is submitted:
 - There is a likelihood of ongoing drainage effects on peatland habitat adjoining blanket bogland proposed to be disturbed.
 - The applicant has noted that there is the potential for high collision risk for bats at several locations on the site. The applicant proposes curtailment would be implemented during periods with high median bat activity, with simultaneous activity monitoring taking place. I submit that displacement is most likely to result over a relatively short period at locations where previously high median bat activity occurs at present. I note that the buildings on site where bat activity was recorded are proposed to be retained, one of which is acknowledged by the applicant as being an active bat roost.

11.4.3 My considerations on ornithology as presented in the EIAR are as follows:

- The applicant undertook an extensive range of field surveys, as set out in Appendices 7.2 and 7.6 of the EIAR.
- The bird species recorded within the zone of influence of the proposed development included Annex I species Golden Eagle, Golden Plover, Goshawk, Hen Harrier, Merlin, Osprey, Peregrine, Red Kite, and Whooper Swan. It also included Red listed species Curlew, Kestrel, Red Grouse, Snipe,

White-tailed Eagle, and Woodcock. Raptors recorded included Buzzard and Sparrowhawk. Hen Harrier roosts have been recorded within the wind farm site.

- Birds recorded at the site included Golden Eagle, Hen Harrier (including roosting), Merlin, Red Grouse, Osprey, Red Kite, Whooper Swan, Peregrine, Curlew, Kestrel, Snipe (including breeding territories), White-tailed Eagle, Woodcock, Buzzard (including breeding territories), and Sparrowhawk (including breeding territories).
- I draw the attention of the Board to Appendices 7-4 of the EIAR. The activity over, on and in the immediate vicinity of the site by birds of conservation value is evident. This is an area that is important for birds of conservation value.
- Habitat loss, displacement and collision risk arising from a development of this scale, height and location pose concerns for many of these bird species, notably for those using the site for foraging and breeding. I note the applicant's analysis in Section 7.8.2 of the EIAR.
- There are 23 wind farms and 113 existing/permitted turbines within 20km of the site. There are some 39 turbines within 3km of the site and 14 turbines permitted beside the site (Aught Wind Farm). I submit that the cumulative impact of wind farm development in this area must be substantially eroding the quality of the environment for sensitive bird species of conservation value by distorting migratory routes, eroding habitat, encroaching on foraging areas, affecting roosting and breeding sites, etc. The proposed development would add to this impact. The species of conservation value identified in the applicant's surveys are likely being squeezed out of this area as habitats are displaced and distorted by increasing wind farm development.

11.4.4 I submit to the Board that the range of birds of conservation value observed by the applicant on, over and in close proximity to the site in its surveys indicates this is an area of significant ornithological value. This area is under significant pressure from existing wind farm development. The potential for further habitat loss, displacement, and collision risk by yet more turbines in this area is apparent from the proposed development. The Board will also note that the proposed turbines are significantly

higher and larger than the average turbines existing at present at this location, posing a notably greater risk of collision and avian displacement.

11.4.5 The cumulative impact would be significant in my opinion. I note the applicant's assessment of cumulative effects in Section 7.12 of the EIAR. The assessment undertaken of the proposed wind farm with each of the many wind farms in the locality on an individual basis is a wholly misplaced methodology in the assessment of cumulative effects, in my opinion. It is evident that the effect of the proposed wind farm alongside the significant array of wind turbines in this area would have very significant adverse impacts for habitat loss, displacement and collision risk. Comparing total areas occupied by turbines against the expansiveness of the habitats within the entire Inishowen peninsula is misplaced in my opinion. This does not offer a valued consideration of actual cumulative effects at this location, where there are significant numbers of turbines in close proximity and where there are known habitats used for breeding, roosting, foraging, etc.

11.4.6 Finally, I wish to impress upon the Board my considerations in my Planning Assessment in relation to impact on biodiversity and ornithology in particular. The applicant's recent surveys, set out in its response to the submission by the Department of Housing Local Government and Heritage (DAU), strongly reinforce the importance of this site and its immediate location for White-tailed Eagle, Merlin and Goshawk, in addition to what was not known at the time of the preparation of the EIAR.

11.5. **Lands, Soils and Geology**

11.5.1 The applicant's EIAR addressed a baseline assessment of the setting of the proposed development, discussed potential likely significant effects, and set out mitigation measures. Appendix 8-1 of EIAR consists of a Geotechnical and Peat Stability Assessment Report.

11.5.2 I note the following:

- Blanket peat is the dominant soil type at the site and in the wider area, including along the grid connection route. Peat depths across the site range from 0 to greater than 5.6m, with an average depth of approximately 2m.
- Peat depths at recorded turbine locations vary from 0.5m to 3.2m, with an average depth of 2m. The mineral subsoils underlying the peat at the proposed turbine locations typically comprised soft to firm silt or silt/clay which is typically gravelly. Average peat depths of 1.5m and above were recorded at 11 of the proposed turbine locations. Possible bedrock was met at locations of proposed turbines T1, T9 and T14.
- Peat thicknesses at existing and proposed access roads are typically less than 2m, with localised depths of 4m.
- The average peat depth at the proposed peat repository is 5m and is 0.5m at the proposed borrow pit.
- Two GSI mapped faults intercept the site, one SW-NE trending fault at the wind farm site and one N-S trending fault at the eastern end of the site near the proposed link road works.
- There are no recorded peat failures or landslides on the site.
- The applicant's peat stability assessment (Appendix 8-1) concluded that the peat characteristics and ground conditions on the site are similar to those encountered on successfully developed wind farm sites in the area. The assessment also found that the main infrastructure locations each have an acceptable factor of safety for undrained and drained conditions of greater than 1.3 and are suitable for the proposed development.
- For the undrained analysis, there was one location (out of 220 locations analysed) along a section of track where a Factor of Safety of 1.24 was recorded. For the drained analysis, there were six locations where there was a Factor of Safety ranging from 1.02 to 1.27. These areas coincide with steeper slope angles or localised deeper areas of peat.
- The estimated volume of peat to be extracted is 415,600m³. The turbines and access roads would require excavation of 335,000m³ of peat. The estimated

volume of other spoil to be excavated is 72,000m³. This gives a total of 487,600m³.

- The volume of rock to be excavated from the borrow pit is estimated to be 360,000m³.

11.5.3 The main factors that influence peat stability are slope angle, shear strength of peat, depth of peat, pore water pressure, and loading conditions. I note that there are what can only be termed very significant volumes of peat proposed to be excavated for this development and proposed to be moved and deposited in the borrow pit and repository. I note the deeper peat at some turbine locations and along sections of proposed new access roads. I acknowledge the acceptable factor of safety for undrained and drained conditions at main infrastructure locations. I acknowledge the proposed development includes the felling of approximately 80.5 hectares of commercial forestry. I further acknowledge the SW-NE trending fault at the wind farm site.

11.5.4 I note the significant potential instability associated with works of the nature proposed, the transportation and storing of substantial volumes of peat and other spoil, and the interference with the natural terrain by the development of the turbine bases, the hardstanding areas, the construction of access roads, and the development of other infrastructure.

11.5.5 I draw the attention of the Board to my assessment earlier on management of waste materials and site drainage. I have serious environmental concerns relating to the proposed development, particularly relating to the extraction, handling and management of peat and the uncertainties relating to the applicant's understanding of the site conditions.

11.6. **Water**

11.6.1 The applicant's EIAR described the existing water environment, identified likely effects on ground and surface waters and mitigation measures, and considered residual and cumulative effects.

11.6.2 My observations on water are as follows:

- In terms of regional hydrology, the proposed wind farm and grid connection would be located within the Lough Swilly surface water catchment.
- In terms of local hydrology, the northern section of the site is located within the Crana River surface water catchment while the southern section is located within the Mill River surface water catchment. Both rivers drain to Lough Swilly.
- The northern section of the site would contain nine of the proposed 15 turbines, the borrow pit, the peat and spoil repository, and a temporary compound. The southern section would contain six proposed turbines, a construction compound, the met mast, the substation and the grid connection route.
- The majority of the watercourses from the northern section of the site flow directly to the Crana River along the northern boundary of the site. The main watercourse on the site draining to the Crana River is the Glenard River. The remaining watercourses in the northern section flow into the Camowen River which is a tributary of the Crana River.
- The southern half of the site initially drains into the Owenkillew River which is a sub-catchment of the Mill River. The western end of the grid connection drains to the Maragh River which is a sub-basin of the Owenkillew River.
- Four new stream crossings and two existing stream crossing upgrades would be required to facilitate wind farm infrastructure.
- There are numerous manmade drains within the site, mainly to drain the forestry plantations.
- The applicant noted that biological Q rating from EPA monitoring points in local catchments downstream of the site for the Owenkillew and Mill Rivers is mainly 'High', while the Crana River is more variable, ranging from 'Poor' to 'Good'.
- Groundwater baseflow contribution to local streams is estimated to be very low all year round. The hydrology of the site is stated to be dominated by surface water runoff on the bog surface and within existing drainage channels.

- There are no mapped groundwater source protection areas for public water supplies or group scheme in the site area. There is a mapped public water supply abstraction from the Crana River 10km downstream of the site. There are no wells registered within 4km of the site.

11.6.3 The assessment of the issue of water is inextricably linked with the soils and geology of this location, the proximity to waterbodies throughout the site, the extent of peatland, and the potential to impact on waterbodies on and beyond this site. The applicant proposes a very complex scheme of drainage provisions and the deliverance of these, in practical terms, has been queried earlier given the very precise applications proposed and the reality of the construction environment and weather conditions that will prevail, along with the uncertainties highlighted. I put it to the Board that there likely will be a significant potential for dependence on the suspension of works during periods of heavy rainfall to avoid potential pollution events which will require comprehensive control measures and which may potentially involve the application of emergency drainage provisions. The entrainment of suspended solids and the release of nutrients to waterbodies is evidently a distinct concern with a development of this nature.

11.6.4 I acknowledge that the applicant proposes an extensive range of drainage mitigation measures at the construction and operational phases. The complexity of the drainage management system has been referred to earlier in my planning assessment. I must emphasise that I have serious concerns about the likely impacts on surface waters at this location from the proposed development. This arises from concerns relating to the amount of peat being extracted and managed at this site, the provision of a highly complex site drainage system, the maintenance and oversight of same particularly at the construction stage, the upland nature of the site, the average rainfall for this location, the dumping of peat into a borrow pit requiring very significant high retaining buttresses, as well as the necessity to spread additional extensive peat onto a repository where deep peat prevails. The extensive network of watercourses throughout the site and the vulnerability of river systems from the construction of the proposed development must be acknowledged.

11.7. **Air Quality and Climate**

11.7.1 The applicant's EIAR identified, described and assessed potential effects on air quality and climate arising from the construction, operation and decommissioning of the proposed development.

11.7.2 My considerations are as follows:

- I have acknowledged earlier in my assessment that the principle of the development of a wind farm would be consistent with the aims of reducing greenhouse gas emissions, improving renewable energy production, and contributing to the aim of achieving a low carbon economy.
- The proposed development would impact on the consideration of the carbon balance between the use of the wind farm and the loss of carbon stored in the peat on the site. However, it is accepted that over time the CO₂ lost by the construction of a wind farm would be displaced by the carbon saving of the wind farm after its early years of operation.
- The principal air emissions that would arise would be at the construction phase and would relate to transport emissions and dust generation.
- There would be substantial separation distances between the proposed infrastructure associated with the wind farm development and established residential and farm developments in the area.
- The development would be subject to a Construction Environmental Management Plan and the applicant has an extensive range of mitigation measures aligned with good construction management to address impacts on air quality.

11.7.3 It is considered that the proposed development would not have significant adverse impacts on air quality and climate.

11.8. **Noise and Vibration**

11.8.1 The applicant's EIAR considered the proposed development with due regard to sensitive receptors in the vicinity and examined existing noise sources and noise and vibration sources derived from the proposed development.

11.8.2 My planning assessment has examined the noise impact of the proposed development at the construction, operational and decommissioning phases. I do not propose to repeat these considerations.

11.8.3 My considerations on vibration are as follows:

- The site is remote from sensitive receptors, with the nearest residential property being 723m from proposed Turbine 11.
- The likely significant vibration impacts would arise at the construction phase of the proposed development. Such impacts would be short-term.
- It is not anticipated that the construction of the turbine bases (including piling), the erection of the turbines, the construction of the substation, the development of access roads, the provision of a borrow pit (including blasting activity), or the construction traffic would result in guidance limits relating to vibration being exceeded at any of the nearest sensitive receptors.

11.9. **Landscape and Visual**

11.9.1 The Board will note my earlier assessment of the environmental effects of the proposed development in terms of landscape and visual impacts. I do not propose to repeat that assessment here. Suffice to indicate the following:

- The proposed development would have significant adverse landscape and visual impacts, both locally and over greater distances from roads, scenic routes, and from tourist and amenity locations and it would impact on scenic views.

- The height and scale of the proposed turbines would result in the development being highly visible, where much of the site is within a designated Area of High Scenic Amenity.
- The applicant's EIAR clearly shows the prominence of a development of this scale within and from sensitive landscapes beyond the site and how there would be expansive views of the proposed turbines throughout much of the wider area within the defined Zone of Theoretical Visibility.
- Incongruity with the natural landscape could not be avoided.
- The cumulative impact of the proposed development with existing and permitted wind farm development at this location would be significant, with landscape and visual impacts greatly increased.

11.9.2 Overall, it is reasonable to conclude that the proposed development would have a significant adverse landscape and visual impact.

11.10. **Cultural Heritage**

11.10.1 The applicant's EIAR examined the potential impacts of the proposed development on recorded archaeology and the cultural heritage of the site and the general area in which it is proposed to be located.

11.10.2 My considerations are as follows:

- The site of the proposed development comprises upland coniferous forestry mainly. The principal features of cultural heritage relevant to the site relate to archaeology. There are no known features of archaeological heritage on the site.
- The nearest National Monument is some 7.7km from proposed Turbine 12. The proposed development would not have a significant visual impact on the setting of this monument which is located west of Buncrana.

- There are 46 structures on the Record of Protected Structures within 5km of the proposed turbines, the nearest being a field system 1km to the east of the site boundary.
- There are no protected structures within 7km of the site. There are 14 NIAH structures within 5km of the nearest proposed turbines. These features are mainly well screened.
- I acknowledge that the assessment of the impact on the setting of archaeological sites beyond the site of the proposed development can be subjective but again note the extent of assessment of this issue within the EIAR. This has demonstrated that the likely indirect impacts on the wide range of monuments would not be significant.
- I acknowledge that, as wind farm development increases in this area, the cumulative impact on the surrounding archaeological resource would likely increase.
- The applicant has provided a range of mitigation measures, which include archaeological monitoring of groundworks.

11.10.3 Overall, I conclude that the proposed development is not likely to have a significant environmental impact on cultural heritage.

11.11. **Material Assets**

11.11.1 The material assets examined by the applicant were transportation infrastructure and telecommunications and aviation. The Board will note my assessment on traffic impact and I do not propose to repeat the conclusions drawn in that assessment. Suffice to indicate that the applicant has comprehensively assessed the proposed delivery access route and the construction-related traffic impacts, has identified where the potential impacts would likely result, and has drawn up a range of mitigation measures to reduce the significance of the potential impacts. With the proposed mitigation measures, I do not envisage that there would be any substantial long-term adverse impact for the road network affected. The Board will further note my considerations on the concerns of the observer Donal Doherty.

11.11.2 On matters relating to telecommunications and aviation, I submit the following:

- I note that the applicant was in consultation with national and regional broadcasters, fixed and mobile telephone operators, aviation authorities, and other relevant service providers.
- The proposal would have no residual impact on telecommunications signals of any operator due to the distance from or absence of any links in the area.
- The EIAR notes that an agreement was reached between City of Derry Airport and the applicant for implementation of mitigation measures and is included in Appendix 14-3. I further note the submission of the City of Derry Airport to the Board, wherein it is stated that it is content with the development as proposed and it is anticipated that it will have no adverse effect on the airport operations.
- Other mitigation measures generally requested by the Irish Aviation Authority and the Department of Defence are provided in the EIAR.

11.11.3 Having regard to the above, I consider that the environmental impacts of the proposed development at the construction and operational phases on telecommunications and aviation would not be significant.

11.11.4 Finally, regarding utilities in general, I note that the EIAR states that there are no water services located within the public road section of the proposed grid connection route.

11.12. **Cumulative Impacts**

11.12.1 I note that the applicant in each section of the EIAR considered the cumulative impacts of the proposal with other land uses, plans and projects in the wider area. I further note the extent of established and permitted wind farm developments in what may be termed the immediate vicinity of this site. I am satisfied that there are clearly a number of wind farm projects which could reasonably be determined to constitute

development that would derive significant cumulative environmental impacts with the proposed development, notably in relation to the ornithological impact and the landscape and visual impact. There may also be some potential concerns for drainage and peat storage arising from the proposed development coinciding with the impacts of other wind farm development yet to be developed and which may proceed in the vicinity of the proposed development.

11.13. Interaction of Impacts

11.13.1 Chapter 16 of the EIAR examined the interactions of the potential impacts arising.

A matrix is presented to identify potential interactions (Table 16-1). I have considered the interrelationships between factors and whether these might affect the environment, even though in some instances the effects may be acceptable on an individual basis. In conclusion, I am satisfied that there would be significant adverse effects arising, particularly for population and human health / soils / geology / water / biodiversity and for landscape / biodiversity, which cannot be avoided, managed or mitigated by the measures which form part of the proposed development or by planning conditions. There are concerns which remain in relation to human health and noise. My assessment details the extent of adverse impacts arising.

11.14. Major Accidents

11.14.1 I note that Chapter 15 of the EIAR addresses major accidents and natural disasters. I recognise that fire risk can be a potential hazard from the operations of a wind farm. I consider that it is reasonable to observe that the remote siting of the development from established residential and other development, the application of modern technologies, and continued monitoring of infrastructure would aid in reducing significant fire risks to the wider community. The other major potential accident that could result from the proposed development would relate to a landslide and/or peat slippage from excavation, handling and storage of peat in the development of turbines, roads and other infrastructure and the development of peat and waste repositories in this upland area. This issue has been addressed in my planning assessment and the potential for a major accident resulting in significant adverse environmental impact arising from the development of this project is

recognised. The associated health and safety risks at the construction stage for workers arising from such an event is noted.

11.15. Transboundary Effects

11.15.1 The site of the proposed development is located approximately 7km from the border of County Donegal with County Derry. I acknowledge that large turbine components are proposed to be delivered to Foyle Port in Derry and would be transported via a road network which includes part of the road network in Derry. Deliveries are proposed to be made at night to minimise impacts on other road users and temporary provisions are appropriately proposed to accommodate vehicular movements. It is also noted that the proposed turbines would be visible across Lough Foyle. It is accepted that the sensitive locations from which views of proposed turbines could be gained would be distant and the impacts would not be significant in visual or landscape terms.

11.15.2 I acknowledge that the applicant's EIAR described and assessed the potential transboundary impacts of the proposed development when considering each environmental factor. Further to this, I note the array of submissions which the Board has received via the Northern Ireland Planning Service. Suffice to indicate that there are no concerns raised about cross-border impacts arising from the proposed development. I further note that, following the receipt of the applicant's response to observations and the forwarding of this response to the observers, the Northern Ireland Planning Service placed a public notice in a newspaper inviting public submissions. I note that most of the submissions from the Northern Ireland Planning Service, further to the applicant's response to observations, were received by the Board on 5th March, 2024. These can be synthesised as follows:

The Department for Infrastructure Regional Planning Policy & Casework noted the responses received from the bodies who were consulted.

Northern Ireland Water confirmed that the proposed development would not have any impact on existing NIW infrastructure and that the application does not fall within a NIW Catchment.

RSPB Northern Ireland stated that it had no further comments and repeated its previous comments.

The Department of Agriculture, Environment and Rural Affairs reiterated its previous submission. The Water Management Unit is content with the proposal. The Regulation Unit stated it had no comment to make. The Natural Environment Division stated the proposal would not have a significant adverse impact on Natura 2000 sites.

The Loughs Agency stated that the proposal falls outside of its geographical jurisdiction and therefore it will not be commenting on it.

Derry City & Strabane Council submitted that it is unlikely that the cumulative noise emissions from the proposed wind farm and from existing wind farms would adversely affect the amenity of properties in the Council's area. There were no objections in principle to the proposed development.

The City of Derry Airport submitted that it is content with the proposed development as it would have no adverse effect on its operations.

The Department for Infrastructure Rivers Planning Advisory & Modelling Unit submitted that it had no concerns about flood risk emanating from the site across the border.

The Board was requested to await a further submission. One further submission was received on 22nd April, 2024 from Derry City and Strabane District Council. Therein, it was stated that the Members have no comment they wish to make on the application.

11.15.3 Overall, I consider that the proposed development would not have significant transboundary effects with regard to the environmental factors considered above. Further to this, I draw the attention of the Board to my appropriate assessment below and the considerations given to the effects on SCI bird species associated with Lough Foyle Special Protection Area (Site Code: UK9020031).

11.16. **Reasoned Conclusion**

11.16.1 Having regard to the examination of environmental information contained above, and in particular to the EIAR, and the submissions from the planning authority, prescribed bodies, the Northern Ireland Planning Service, and the observer, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- There are significant uncertainties relating to the proposed development being constructed on a peat-dominated environment. A vast volume of waste material totalling 487,600m³ (of which more than 85% would be peat) is required to be handled, stored and managed on this site. The proposals to excavate a borrow pit and to provide a separate repository and to seek to contain and store vast volumes of peat and other spoil material on this upland hillside, the development of access tracks across deep areas of peat, the construction of turbines and hardstanding areas on bog, the removal of extensive conifer plantation, and the provision of a highly complex drainage system would result in a significant pollution threat to waterbodies and the wider environment resulting from a failure to contain the waste spoil.
- An extensive range of birds of conservation value have been observed on, over and in close proximity to the site in the applicant's surveys, indicating that this is an area of significant ornithological value. It is also an area under significant pressure from existing wind farm development, with 65 existing and permitted turbines within five kilometres of the proposed development and a further 42 turbines within 20km. The potential for further habitat loss, displacement, and collision risk by yet more turbines would result from the proposed development. This adverse cumulative ornithological impact is compounded by the proposed turbines being significantly higher and larger in scale than the average turbines existing at present at this location, posing a notably greater risk of collision and avian displacement. The cumulative impact would be significant.
- The proposed development would result in significant adverse landscape and visual impacts arising from the siting, scale and height of the proposed turbines, and the cumulative impact with the extensive array of established

turbines in the immediate vicinity. The proposed development would be highly prominent over an extensive geographical area, would have a dominant, obtrusive, skyline impact on visually and environmentally sensitive landscapes, and would impact on the amenity and tourism value of the area. The proposal would significantly add to the extent of turbines on the existing ridgeline and it would expand the linear spread. This cumulative impact and siting of the proposed development would contribute further to the erosion of the quality of the natural landscape.

11.16.2 The submitted EIAR has been considered with regard to the guidance provided in the EPA documents 'Guidelines for Planning Authorities and An Bord Pleanála on Carrying out Environmental Impact Assessment' (2018), 'Guidelines on the Information to be Contained in Environmental Impact Assessment Reports' (draft August 2017), and 'Advice Notes for Preparing Environmental Impact Statements' (draft September 2015).

11.16.3 In conclusion, the likely significant environmental impacts arising as a consequence of the proposed development have been satisfactorily identified, described and assessed. I am satisfied that there would be significant adverse residual impacts relating to soils, geology, water, biodiversity, and landscape and visual effects. Therefore, the proposed development is determined to have unacceptable direct and cumulative impacts on the environment. The benefits resulting from this renewable energy project cannot, and would not, outweigh the serious adverse environmental effects which its construction and operation would likely deliver.

12.0. **Appropriate Assessment**

12.1. **Screening for Appropriate Assessment**

12.1.1 ***Background***

I note that the applicant submitted an Appropriate Assessment Screening Report as Appendix 1 of the Natura Impact Statement (NIS). This Stage 1 AA Screening Report was prepared in line with current best practice guidance. It provides a description of the proposed development, identifies European sites within a possible zone of influence of the development, identifies the possibility of significant effects, and addresses the likely cumulative impact. The conclusion of the applicant's AA Screening Report is as follows:

“Following an examination, analysis and evaluation of the relevant data and information set out within this Screening Report, it cannot be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed development, individually or in combination with other plans and projects, would be likely to have a significant effect on the following sites:

- *Lough Swilly SAC (002287)*
- *North Inishowen Coast SAC (002012)*
- *Lough Swilly SPAS (004075)*
- *Lough Foyle SPA (004087)*
- *Lough Foyle SPA (UK9020031)*
- *Trawbrega Bay SPA (004034)*

As a result, an Appropriate Assessment is required, and a Natura Impact Statement has been prepared in respect of the proposed development in order to assess

whether the proposed development will adversely impact the integrity of these European Sites.

No pathways for significant effect on any other European Site were identified. Thus it can be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed development, individually or in combination with other plans and projects, would be likely to have a significant effect on any other European Sites other than those listed above.”

Having reviewed the screening documents and additional submissions to the Board, I am satisfied that the information allows for a complete examination and identification of potential significant effects of the development, alone or in combination with other plans and projects, on European sites.

Note: This screening is undertaken without consideration being given to the potential for a landslide, peat slippage and/or site drainage failures. It is noted that the applicant's screening did not consider this issue.

12.1.2 Description of Development

The applicant provides a description of the project and the characteristics of the project in Section 2 of the AA Screening Report. In summary, the development comprises:

- Construction of 15 no. turbines and associated hardstand areas with the following parameters:
 - A total tip height in the range of 162 metres minimum to 173 metres maximum,
 - Hub height in the range of 96 metres minimum to 107 metres maximum, and

- Rotor diameter in the range of 132 metres minimum to 140 metres maximum;
- 1 no. 110kV permanent electrical substation including a control building with welfare facilities, all associated electrical plant and equipment, security fencing, all associated underground cabling, wastewater holding tank and all ancillary structures and works;
- All works associated with the permanent 110kV connection from the proposed substation to the national electricity grid, via underground cabling within permanent cable ducts in the townlands of Meenyanly, Carnamoyle, Sorne, Owenkillew and Bornahone, Meenakeeragh, Tullydush Upper, Annaslee and Ballynahone to the existing Trillick 110kV substation in the townland of Ballynahone;
- 1 no. Meteorological Mast 104 metres in height;
- Upgrade of existing tracks and roads, provision of new permanent site access roads including a new site entrance (in the townland of Glenard);
- 1 no. borrow pit;
- 1 no. permanent peat and spoil repository area;
- Permanent placement of peat and spoil along sections of site access roads as part of the peat and spoil management plan for the site;
- 2 no. temporary construction compounds;
- Permanent recreation and amenity works, including marked trails, seating areas, amenity car park, and associated amenity signage;
- All temporary works associated with the facilitation of turbine component and abnormal load delivery;
- Construction of a permanent link road between the R240 Regional Road and the L1731 local road; construction of a second permanent link road on the L1731; permanent road widening at three locations along the L1731 (in the townlands of Carrowmore or Glentogher and Illies) all of which will facilitate the delivery of abnormal loads to the site during the construction period and may be used during the operational period if necessary or to facilitate the

decommissioning of the wind farm. Following the construction period, access to the link roads will be closed off;

- Site drainage;
- 80.5 hectares of forestry felling to facilitate construction and operation of the proposed development; and
- All associated site development works.

12.1.3 *European Sites*

I note that the applicant identified and examined four Special Areas of Conservation and five Special Protection Areas. It was determined that there was no potential for significant effects on the Magheradrumman Bog SAC and River Faughan and Tributaries SAC as no pathways for effect were identified and the sites were not within the likely zone of impact. It was further determined that there was no potential for significant effect on Horn Head to Fanad Head SPA, with the site of the proposed development having no suitable habitat for the species for which the SPA has been designated and with due regard to Species of Conservation Interest for the SPA not being recorded during dedicated bird surveys within the likely zone of influence. This is accepted and further assessment of the likely effects on these three European sites is not being pursued.

The following is noted about each of the remaining European sites:

<u>European site</u>	<u>Distance from the Site</u>
Lough Swilly SAC	2.5km (c. 5km hydrologically)
North Inishowen Coast SAC	11.2km (c.13km hydrologically)
Lough Swilly SPA	3.3km
Lough Foyle SPA	5km (c.7km hydrologically)
Lough Foyle SPA (UK)	7km (c.7km hydrologically)
Trawbrega Bay SPA	11.2km (c.13km hydrologically)

The qualifying features of conservation interest and conservation objectives for these sites are as follows:

Lough Swilly SAC (Site Code: 002287)

Qualifying Features

Estuaries

Coastal lagoons

Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles

Lutra lutra (Otter)

Conservation Objectives

To restore the favourable conservation condition of Coastal lagoons, Atlantic salt meadows, Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles, and Otter.

To maintain the favourable conservation condition of Estuaries.

North Inishowen Coast SAC (Site Code: 002012)

Qualifying Features

Mudflats and sandflats not covered by seawater at low tide

Perennial vegetation of stony banks

Vegetated sea cliffs of the Atlantic and Baltic coasts

Fixed coastal dunes with herbaceous vegetation (grey dunes)

Machairs (* in Ireland)

European dry heaths

Vertigo angustior (Narrow-mouthed Whorl Snail)

Lutra lutra (Otter)

Conservation Objectives

To restore the favourable conservation condition of Fixed coastal dunes with herbaceous vegetation (grey dunes) and Machairs (* in Ireland).

To maintain the favourable conservation condition of:

Mudflats and sandflats not covered by seawater at low tide

Perennial vegetation of stony banks

Vegetated sea cliffs of the Atlantic and Baltic coasts

European dry heaths

Narrow-mouthed Whorl Snail

Otter

Lough Swilly SPA (Site Code: 004075)

Qualifying Features

Great Crested Grebe (Podiceps cristatus)

Grey Heron (Ardea cinerea)

Whooper Swan (*Cygnus cygnus*)

Greylag Goose (*Anser anser*)

Shelduck (*Tadorna tadorna*)

Wigeon (*Anas penelope*)

Teal (*Anas crecca*)

Mallard (*Anas platyrhynchos*)

Shoveler (*Anas clypeata*)

Scaup (*Aythya marila*)

Goldeneye (*Bucephala clangula*)

Red-breasted Merganser (*Mergus serrator*)

Coot (*Fulica atra*)

Oystercatcher (*Haematopus ostralegus*)

Knot (*Calidris canutus*)

Dunlin (*Calidris alpina*)

Curlew (*Numenius arquata*)

Redshank (*Tringa totanus*)

Greenshank (*Tringa nebularia*)

Black-headed Gull (*Chroicocephalus ridibundus*)

Common Gull (*Larus canus*)

Sandwich Tern (*Sterna sandvicensis*)

Common Tern (*Sterna hirundo*)

Greenland White-fronted Goose (*Anser albifrons flavirostris*)

Wetland and Waterbirds

Conservation Objectives

To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

To maintain the favourable conservation condition of the wetland habitat in Lough Swilly SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

Lough Foyle SPA (Site Code: 004087)

Qualifying Features

Red-throated Diver (*Gavia stellata*)

Great Crested Grebe (*Podiceps cristatus*)

Bewick's Swan (*Cygnus columbianus bewickii*)

Whooper Swan (*Cygnus cygnus*)

Greylag Goose (*Anser anser*)

Light-bellied Brent Goose (*Branta bernicla hrota*)

Shelduck (*Tadorna tadorna*)

Wigeon (*Anas penelope*)

Teal (*Anas crecca*)

Mallard (*Anas platyrhynchos*)

Eider (*Somateria mollissima*)

Red-breasted Merganser (*Mergus serrator*)

Oystercatcher (*Haematopus ostralegus*)

Golden Plover (*Pluvialis apricaria*)

Lapwing (*Vanellus vanellus*)

Knot (*Calidris canutus*)

Dunlin (*Calidris alpina*)

Bar-tailed Godwit (*Limosa lapponica*)

Curlew (*Numenius arquata*)

Redshank (*Tringa totanus*)

Black-headed Gull (*Chroicocephalus ridibundus*)

Common Gull (*Larus canus*)

Herring Gull (*Larus argentatus*)

Wetland and Waterbirds

Conservation Objectives

To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

To maintain the favourable conservation condition of the wetland habitat in Lough Foyle SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

Lough Foyle SPA (Site Code: UK9020031)

Qualifying Features

Bewick's Swan wintering population

Whooper Swan wintering population

Golden Plover wintering population Bar-tailed Godwit wintering population

Light-bellied Brent Goose wintering population

Great Crested Grebe wintering population

Cormorant wintering population

Greylag Goose wintering population

Shelduck wintering population

Wigeon wintering population

Teal wintering population

Mallard wintering population

Eider wintering population

Red-breasted Merganser wintering population

Oystercatcher wintering population

Lapwing wintering population

Knot wintering population

Dunlin wintering population

Curlew wintering population

Redshank wintering population

Waterfowl Assemblage wintering population

Habitat Extent Roost sites wintering population

Conservation Objectives

To maintain or enhance the population of the qualifying species

To maintain or enhance the range of habitats utilised by the qualifying species

To ensure that the integrity of the site is maintained;

To ensure there is no significant disturbance of the species and

To ensure that the following are maintained in the long term:

- Population of the species as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species

Additional Objectives are:

Waterfowl Assemblage wintering population - Maintain species diversity contributing to the Waterfowl Assemblage.

Habitat Extent - Maintain or enhance the area of natural and semi-natural habitats used or potentially usable by Feature bird species. (2056.13 ha intertidal area) subject to natural processes.

Habitat Extent - Maintain the extent of main habitat components subject to natural processes.

Roost sites wintering population - Maintain or enhance sites utilised as roosts.

Trawbrega Bay SPA (Site Code: 004034)

Qualifying Features

Barnacle Goose (*Branta leucopsis*)

Light-bellied Brent Goose (*Branta bernicla hrota*)

Chough (*Pyrrhocorax pyrrhocorax*)

Wetland and Waterbirds

Conservation Objectives

To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA.

To maintain the favourable conservation condition of the wetland habitat in Trawbrega Bay SPA as a resource for the regularly-occurring migratory waterbirds that utilise it.

12.1.4 Identification of Likely Effects

It is first acknowledged that the proposed development is not connected with or necessary for the conservation management of any Natura 2000 site. I further note that the site and all works associated with the proposed development are intended to take place outside of the above referenced SACs and SPAs. As a result, there would be no direct loss of habitat within these European sites.

The impacts by way of mortality from collision for the Species of Conservation Interest of SPAs are noted and the applicant refers to these as direct impacts. It is acknowledged that there would be hydrological connectivity with the European sites, with the proposed site being hydrologically connected to Lough Swilly SAC and SPA and the grid connection and/or turbine delivery routing being hydrologically connected to the other European sites.

Further to the above, the following is observed for each European site:

- Lough Swilly SAC is located 2.5km from the site and 5km hydrological distance from it. The site is connected to the SAC via tributaries of the Crana River within the north of the site and the Mill River within the south of the site. It is accepted that, due to their terrestrial nature, there is no potential for indirect effects on the Qualifying Interests Molinia meadows on calcareous, peaty or clayey-silt-laden soils and Old sessile oak woods with Ilex and Blechnum in the British Isles.

- North Inishowen Coast SAC is located 11.2km from the site and 13km hydrological distance from it. The proposed turbine delivery route crosses tributaries of the Glennagannon River which enters the SAC 13km to the north of the site. A potential pathway for indirect effect on Mudflats and sandflats not covered by seawater at low tide and on Otter by water quality deterioration has been identified by the applicant. It is accepted that there is no potential for indirect effects on the other Qualifying Interests of this SAC.
- Lough Swilly SPA is 3.3km from the site. The SPA is located hydrologically upstream but the applicant notes that deterioration in water quality arising from the development could result by way of tidal movements in the estuary, which could have the potential for significant effect on the Qualifying Interest Wetland and Waterbirds. It is acknowledged that Grey Heron, Mallard, Whooper Swan, Greylag Goose, Wigeon, Black-headed Gull, and Common Gull were recorded in bird surveys and that further assessment would be required in relation to collision mortality, disturbance and displacement. It is accepted that the other Species of Conservation Interest were not recorded within the zone of influence during bird surveys and are not considered for further assessment.
- Lough Foyle SPA is 5km from the site and 7km hydrological distance from it. The potential pathway for direct effects from collision and mortality is accepted. It is further accepted that, due to the proposed turbine delivery route crossing the Cabry River (which drains to the SPA), further assessment is required in relation to potential deterioration in water quality for the Qualifying Interest Wetland and Waterbirds. It is acknowledged that Whooper Swan, Greylag Goose, Wigeon, Mallard, Golden Plover, Curlew, Black-headed Gull, Common Gull, and Herring Gull were recorded in bird surveys and that further assessment would be required in relation to collision mortality, disturbance and displacement. It is accepted that the other Species of Conservation Interest were not recorded within the zone of influence during bird surveys and are not considered for further assessment.

- Lough Foyle SPA (UK) is 7km from the site. The potential pathway for direct effects from collision and mortality is again accepted. The applicant notes that the proposed turbine delivery route crosses a watercourse which has indirect hydrological connectivity with the SPA and that there are potential significant effects resulting from deterioration in water quality on supporting wetland habitat. I note that the SPA is located on the eastern shoreline of Lough Foyle and is separated by a significant tidal waterbody. It is acknowledged that Golden Plover, Whooper Swan, Mallard, Greylag Goose, Wigeon, and Curlew were recorded in bird surveys and that further assessment would be required in relation to collision mortality, disturbance and displacement. It is accepted that the other Species of Conservation Interest were not recorded within the zone of influence during bird surveys and are not considered for further assessment.

- Trawbrega Bay SPA is 11.2km from the site and 13km hydrological distance from it. No direct effects are seen to arise. The proposed turbine delivery route crosses tributaries of the Glennagannon River which enters the SAC 13km to the north of the site. As a result, further assessment is required in relation to potential deterioration in water quality for the Qualifying Interest Wetland and Waterbirds. I accept that the SCI bird species for this SPA were not recorded during bird surveys and are not considered for further assessment.

Given the impacts by way of collision and mortality for SCI bird species of the relevant SPAs and the hydrological connectivity referenced above, with the potential for construction, operational and decommissioning activities to indirectly impact on surface water quality, it is accepted that significant effects on the surface water dependent qualifying interests of the SACs and the Wetland and Waterbird qualifying interest of the SPA and for specified SCI bird species cannot be excluded beyond reasonable scientific doubt.

12.1.5 *In-combination Effects*

Cumulative in-combination effects could potentially result with forestry felling and further forestry plantation at this location and with other existing and proposed wind farm development in the wider area. Thus, it is accepted that there is potential for significant cumulative effects with other potential sources of pollution in the area.

12.1.6 *Mitigation Measures*

No measures designed or intended to avoid or reduce any harmful effects of the proposed development on a European site have been relied upon in this screening exercise.

12.1.7 *Screening Determination*

The proposed development has been considered in light of the requirements of Section 177U of the Planning and Development Act 2000 as amended. Having carried out Screening for Appropriate Assessment of the project, it has been concluded that the project individually or in combination with other plans or projects would be likely to give rise to significant effects on Lough Swilly SAC, North Inishowen Coast SAC, Lough Swilly SPA, Lough Foyle SPA, Lough Foyle SPA (UK), and Trawbrega Bay SPA, in view of their Conservation Objectives, and Appropriate Assessment is therefore required.

This determination is based on the following:

- The nature and extent of the proposed works associated with the proposed development and the operation of the wind farm, and
- The known pathways between the site and the European sites.

12.2 **Appropriate Assessment**

12.2.1 **Background**

The proposed development is not directly connected to or necessary for the management of any European site. It is therefore subject to the provisions of Article 6(3) of the EU Habitats Directive. Following the screening process above, it has been determined that appropriate assessment is required as it cannot be excluded on the basis of objective information that the proposed development individually or in-combination with other plans or projects will have a significant effect on Lough Swilly SAC, North Inishowen Coast SAC, Lough Swilly SPA, Lough Foyle SPA, Lough Foyle SPA (UK), and Trawbrega Bay SPA. The possibility of significant effects on other European sites has been excluded on the basis of objective information. Measures intended to reduce or avoid significant effects were not considered in the screening process.

12.2.2 **Natura Impact Statement**

The applicant's Natura Impact Statement (NIS) summarises the AA Screening Report, gives a description of the project, identifies characteristics of the receiving environment and the relevant Natura 2000 sites, discusses potential direct and indirect effects on European sites, and considers residual adverse effects and cumulative effects. The NIS had due regard to the studies, field surveys and consultations undertaken as part of the application. The NIS was prepared in line with current best practice and provides an assessment of a range of potential effects on the SACs and the SPAs arising from the proposed development.

The NIS concluding statement was as follows:

"This NIS has provided an assessment of all potential direct or indirect adverse effects on European Sites.

Where the potential for any adverse effect on any European Site has been identified, the pathway by which any such effect may occur has been robustly blocked through the use of avoidance, appropriate design and mitigation measures as set out within this report and its appendices. The measures ensure that the construction, operation

and decommissioning of the proposed development will not adversely affect the integrity of any European sites.

Therefore, it can be objectively concluded that the Proposed Development, individually or in combination with other plans or projects, will not adversely affect the integrity of any European Site.

Accordingly, for the reasons set out in detail in this NIS, in light of the best scientific knowledge in the field, all aspects of the proposed development which, by itself, or in combination with other plans or projects, may affect the relevant European Sites have been considered. The NIS contains information which the Board, as competent authority, may consider in making its own complete, precise and definitive findings and conclusions and upon which the Board is capable of determining that all reasonable scientific doubt has been removed as to the effects of the proposed development on the integrity of the relevant Natura 2000 sites. In conclusion, in light of the conclusions of the assessment which it shall conduct on the implications for the European sites concerned, the Board is enabled to ascertain that the proposed development will not adversely affect the integrity of any of the European sites concerned.”

I note the submissions received from Donegal County Council, Inland Fisheries Ireland, the Department of Culture, Heritage and the Gaeltacht, Transport Infrastructure Ireland, the Northern Ireland Planning Service, and from Donal Doherty.

Having reviewed the documents with the application, the submissions, reports and consultations, I am satisfied that the available information allows for the assessment of adverse effects of the development on the conservation objectives of Lough Swilly SAC, North Inishowen Coast SAC, Lough Swilly SPA, Lough Foyle SPA, Lough Foyle SPA (UK), and Trawbrega Bay SPA alone, or in combination with other plans and projects.

12.2.3 Appropriate Assessment

Introduction

This assessment considers all aspects of the proposal which could result in significant effects and the mitigation measures designed to avoid or reduce any adverse effects are also considered. The assessment has had due regard to the applicant's submitted Natura Impact Statement, the Environmental Impact Assessment Report, and the reports and submissions received by the Board.

The following guidance is adhered to in the assessment:

DoEHLG (2009) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

EC (2002) Assessment of plans and projects significantly affecting Natura 2002 sites. Methodological guidance on the provisions of Articles 6(3) and 6(4) of the Habitats Directive 92/43/EC.

EC (2018) Managing Natura 2000 sites.

European Sites

The following sites are subject to appropriate assessment:

- Lough Swilly SAC (Site Code: 002287)
- North Inishowen Coast SAC (Site Code: 002012)
- Lough Swilly SPA (Site Code: 004075)
- Lough Foyle SPA (Site Code: 004087)
- Lough Foyle SPA (UK9020031)
- Trawbrega Bay SPA (Site Code: 004034)

A description of these sites and their Conservation and Qualifying Interests / Special Conservation Interests, including any relevant attributes and targets for these sites, are set out in the NIS. Details of these European sites' Conservation and Qualifying

Interests / Special Conservation Interests are set out in the Screening undertaken earlier in this report.

Relevant Aspects of the Proposed Development

I note that, in terms of regional hydrology, the proposed wind farm and grid connection would be located within the Lough Swilly surface water catchment. In terms of local hydrology, the northern section of the site is located within the Crana River surface water catchment while the southern section is located within the Mill River surface water catchment. Both rivers drain to Lough Swilly. The northern section of the site would contain nine of the proposed 15 turbines, the borrow pit, the peat and spoil repository, and a temporary compound. The southern section would contain six proposed turbines, a construction compound, the met mast, the substation and the grid connection route. The majority of the watercourses from the northern section of the site flow directly to the Crana River along the northern boundary of the site. The main watercourse on the site draining to the Crana River is the Glenard River. The remaining watercourses in the northern section flow into the Camowen River which is a tributary of the Crana River. The southern half of the site initially drains into the Owenkillev River which is a sub-catchment of the Mill River. The western end of the grid connection drains to the Maragh River which is a sub-basin of the Owenkillev River. Four new stream crossings and two existing stream crossing upgrades would be required to facilitate wind farm infrastructure.

Section 3 of the applicant's NIS details the characteristics of the proposed works associated with the project and Section 7 identifies other plans, projects and activities relating to potential in-combination effects. I once again acknowledge that the site is outside of and beyond the boundaries of any European site and, as a result, there would be no direct effects on the habitats forming the Qualifying Interests of any European site.

The main aspects of the proposed development that could adversely affect the conservation objectives of the European sites relate to the potential for construction, operational and decommissioning activities to indirectly impact on surface water quality by way of pollution and the potential for turbines to effect SCI bird species.

The potential effects would include:

- Deterioration of water quality arising from a landslide, peat slippage and/or site drainage failure affecting aquatic habitats and species in the European sites,
- A reduction in water quality by way of silt runoff, hydrocarbons, cementitious material and other pollutants during construction, operation and decommissioning which could affect the aquatic habitats and species in the SACs,
- Deterioration in surface water quality by turbine deliveries crossing watercourses that enter European sites and which could affect the supporting wetland habitat of SCI waterbirds, and
- Mortality for SCI bird species associated with SPAs arising from collision with turbines.

The Board will note that the applicant's NIS did not definitively address the likely significant effects on European sites arising from a potential landslide, peat slippage or site drainage failure. My assessment on this issue in relation to management of spoil, drainage provisions and the assessment of soils, geology and water in the EIA section of my assessment have clearly detailed the concerns relating to a risk of a landslide, peat slippage and drainage failure resulting from the proposed development. The outcome arising from one or all of these would have profound impacts on the surface waters of an expansive area in the vicinity of this site, with likely significant effects on Lough Swilly in particular. The following observations synthesise the issues and concerns at hand:

- The proposed development includes the excavation and management of 415,600m³ peat, with the overall total materials being 487,600m³. This a huge volume of waste material, and peat in particular, to be managed on this upland site.
- The proposed development includes deep excavations for turbine bases, development of hardstanding areas, the construction of access roads cutting across the contours on bogland and providing preferential flow paths for surface waters, along with the development of other infrastructure, including new roads and extending existing roads. Significant components of the

proposed development are intended to be sited in close proximity to watercourses.

- There are serious concerns relating to the upland, hillside nature of the area for the proposed repositories, the proximity to existing watercourses, the characteristics of disaggregated peat, the volume and pattern of rainfall in this location, and the distinctive uncertainties relating to the proposed systems for retaining the deposited waste materials.
- The proposed development intends to address the serious threats to surface waters by seeking to employ a very precise and very expansive drainage system in a peat-dominated environment.
- The potential destabilising impacts of proposed engineered drainage works are noted, together with clear felling (80.5 ha.), at a sensitive upland location, where there are concerns about the functionality of the proposed provisions, the timing of construction works, and the ability to adequately manage and maintain such drainage infrastructure.

In my opinion, there is a concern that entrainment of suspended solids and the release of nutrients to waterbodies arising from a possible landslide or failure to contain huge volumes of peat and other waste materials constitute a realistic potential outcome, with potential significant effects for the Lough Swilly European sites with which the site has hydrological connectivity.

Regarding collision by SCI bird species with turbines, I note the following from the applicant's own calculations:

<u>SCI Bird Species</u>	<u>Collisions over Wind Farm Lifetime</u>
Golden Plover	30
Black-headed Gull	9
Herring Gull	9
Whooper Swan	6

Grey Heron	3
Greylag Goose	3
Common Gull	1

It is noted that the applicant has submitted that the collision risk is insignificant in the context of county, national and international populations.

As an aside to the above, I note once again the concerns of the Department of Housing, Local Government and Heritage relating to collision and mortality for Golden Eagle and Hen Harrier. I further note the applicant's recent survey findings relating to White-tailed Eagle, Goshawk and Merlin, with collision risk for White-tailed Eagle noted again. I also acknowledge again the recent publication of *The 2022 National Survey of breeding Hen Harrier in Ireland* and the concerns set out therein.

12.2.4 Mitigation

Section 5 of the applicant's NIS details the range of mitigation measures intended to be employed as part of the proposed development. The measures include provisions set out in the CEMP, mitigation by design, construction methodologies, clear-span watercourse crossings, drainage management, culvert upgrading, handling of hydrocarbons and waste material, control measures for cement, peat stability management, and monitoring.

I submit to the Board that, in the event of a landslide, peat slippage and/or site drainage failures, the applicant's proposed mitigation measures will not work. Indeed, I contend that the applicant's proposed mitigation measures may exacerbate the potential for failure on this site at the construction stage, by creating instability. In my opinion, there is a clear scientific doubt about the effectiveness of the applicant's proposed mitigation measures, notably relating to peat and waste material storage and management and site drainage.

12.2.5 Potentially Significant Cumulative Effects

I note Section 7 of the applicant's NIS wherein a review of plans and projects with the potential to result in cumulative and/or in-combination effects was undertaken. This included a review of the relevant provisions of Donegal County Development Plan and the National Biodiversity Action Plan, other existing and proposed wind farm developments in the wider area, replanting of forestry, and other non-renewable energy related planning applications in the area.

The proposed development individually poses a significant threat from a landslide / failure to contain peat and other waste spoil and, thus, could potentially be likely to adversely affect the integrity of Lough Swilly SAC and SPA. The unknown effect arising from the combined effects with other wind farm developments permitted in the immediate vicinity of this site, in particular the development of Aught Wind Farm (the site of which is 100m to the east at its closest to the proposed site), is an uncertainty which does not allow a definitive conclusion to be drawn on potential significant cumulative effects *beyond scientific doubt*. There is no understanding of potential on- and off-site effects arising from the adjoining development impacting alongside the proposed development which is beside it. I cannot reasonably conclude from this application that the Board is capable of determining that all reasonable scientific doubt has been removed. Another example of uncertainty of cumulative effects, based upon what the applicant has chosen to assess in its NIS, relates to collision and mortality for SCI bird species associated with Lough Swilly and Lough Foyle SPAs. It is unclear as to what the cumulative effects would be arising from the proposed development along with the permitted Aught and Malkell wind farms and with the other existing wind farms at this location, namely Sorne Hill, Glackmore, Flughland, Crockahenny, Meenaward, Lurganboy, and Three Trees. Once again, one cannot reasonably determine that there would be no cumulative effects *beyond scientific doubt* relating to collision and mortality for SCI bird species.

12.2.6 Residual Impacts

Having regard to my considerations on the potential for a landslide, peat/waste spoil slippage, and/or site drainage failure arising from the construction of the proposed development and the lack of any clear understanding about the cumulative effects with other wind farm development in the vicinity of the site, I cannot concur with the

applicant's conclusions that, if the proposed mitigation measures are implemented in full, it is expected that significant effects would not result for the qualifying features of Lough Swilly SAC and/or for the SCI bird species referenced above for Lough Swilly SPA and Lough Foyle SPA.

Following my appropriate assessment of the proposed development and, with due regard to consideration of the proposed mitigation measures, I am not able to ascertain with confidence that the proposed development would not adversely affect the integrity of Lough Swilly SAC in view of the Conservation Objectives of this site. I must also acknowledge that, due to the hydrological connectivity with Lough Swilly SPA and the potential cumulative effect with other wind farm development on SCI bird species associated with this SPA and Lough Foyle SPA, a lack of significant effects on the integrity of these European sites cannot be assured. This conclusion is drawn on a complete assessment of all implications of the proposed development alone and in combination with other plans and projects.

12.2.7 Appropriate Assessment Conclusion

The proposed development has been considered in light of the assessment requirements of the Planning and Development Act 2000 as amended.

Having carried out screening for appropriate assessment of the project, it was concluded that it may have a significant effect on Lough Swilly SAC, North Inishowen Coast SAC, Lough Swilly SPA, Lough Foyle SPA, Lough Foyle SPA (UK), and Trawbrega Bay SPA. Consequently, an appropriate assessment was required of the implications of the project on the qualifying features of those sites in light of their conservation objectives.

Following an appropriate assessment, it has been ascertained that it cannot reasonably be determined that the proposed development, individually or in combination with other plans or projects, would likely have no adverse effect on the integrity of Lough Swilly SAC, Lough Swilly SPA and Lough Foyle SPA, in view of the sites' Conservation Objectives.

This conclusion is based on a complete assessment of all aspects of the proposed project. It is concluded that there is reasonable doubt as to the absence of adverse effects.

This is based on:

- A full and detailed assessment of all aspects of the proposed project, including proposed mitigation measures in relation to the Conservation Objectives of Lough Swilly SAC, Lough Swilly SPA and Lough Foyle SPA;
- Detailed assessment of in-combination effects with other plans and projects;
- Reasonable scientific doubt as to the absence of adverse effects on the integrity of Lough Swilly SAC, Lough Swilly SPA and Lough Foyle SPA.

13.0 Recommendation

I recommend as follows:

Appropriate Assessment

The Board agreed with the screening assessment, appropriate assessment and conclusion contained in the Inspector's report that Lough Swilly SAC (Site Code: 002287), North Inishowen Coast SAC (Site Code: 002012), Lough Swilly SPA (Site Code: 004075), Lough Foyle SPA (Site Code: 004087), Lough Foyle SPA (UK9020031, and Trawbrega Bay SPA (Site Code: 004034) are the European sites for which there is a likelihood of significant effects.

The Board considered the submitted Screening Report for Appropriate Assessment, the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment in relation to the potential effects of the proposed development on the above referenced European sites. The Board noted that the proposed development is not directly connected with or necessary for the management of a European site and considered the nature, scale and location of the proposed development, as well as the report of the Inspector. In completing the

appropriate assessment, the Board adopted the report of the Inspector and concluded that it cannot reasonably be determined that the proposed development, individually or in combination with other plans or projects, would likely have no significant adverse effect on the integrity of Lough Swilly SAC, Lough Swilly SPA and Lough Foyle SPA, in view of the sites' conservation objectives.

Environmental Impact Assessment

The Board completed an environmental impact assessment of the proposed development taking account of:

- (a) The nature, scale, location and extent of the proposed development,
- (b) The Environmental Impact Assessment Report (EIAR) and associated documentation submitted in support of the application,
- (c) The submissions received from the planning authority, prescribed bodies and the observer, and
- (d) The Inspector's report.

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, adequately considers alternatives to the proposed development and identifies and describes direct, indirect, secondary and cumulative effects of the proposed on the environment.

The Board agreed with the examination set out in the Inspector's report of the information contained in the Environmental Impact Assessment Report and associated documentation submitted by the developer and submissions made in the course of the planning application.

The Board considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- A significant risk from water pollution and destruction of habitat, with due regard to the development occurring on a peat-dominated environment, the

requirement for significant volumes of waste peat and spoil material to be handled, stored and managed on the upland site, the uncertainties relating to the provisions to contain and store these extensive volumes of peat and other spoil material on the site, the development of access tracks across deep areas of peat, the construction of turbines and hardstanding areas on bog, the removal of extensive conifer plantation, and the provision, functionality of and reliance on a highly complex drainage system in light of the uncertainties.

- Habitat loss, displacement and collision risk arising from a development of this scale, height and location for bats and birds of conservation value, including Annex I species Hen Harrier, White-tailed Eagle, Merlin, and Golden Plover and for Goshawk (amber conservation status – source: BirdWatch Ireland), together with the cumulative ornithological impact arising with established and permitted wind farm development in the immediate vicinity leading to erosion of the quality of the environment for sensitive bird species of conservation value by distorting migratory routes, eroding habitat, encroaching on foraging areas, and affecting opportunities for roosting and breeding sites.
- Significant adverse landscape and visual impacts arising from the siting, scale and height of the proposed turbines, which would be highly prominent over an extensive geographical area, would have a dominant, obtrusive, skyline impact on visually and environmentally sensitive landscapes, and would impact on the amenity and tourism value of the area, together with the cumulative impact of the proposed development at this location and the expansion of the linear spread of turbines undermining valued scenic, tourist and amenity locations, which would contribute further to the erosion of the quality of the natural landscape.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that the effects of the development on the environment, by itself and in combination with other plans and projects in the vicinity, would not be acceptable due to the health and safety risks and the environmental impacts arising from a potential failure to contain waste peat and other spoil material,

the impact on bats and protected bird species, and the adverse landscape and visual impacts. In doing so the Board adopted the report and conclusions of the inspector.

Having regard to the conclusions drawn in my planning assessment, the assessment of environmental impacts and my assessment of likely significant effects on European sites, I recommend that permission is refused for the proposed development for the following reasons and considerations:

Reasons and Considerations

1. Having regard to:

- (a) The upland and sloping nature of the terrain;
- (b) The high rainfall levels prevalent at this location;
- (c) Blanket bog being the dominant soil type at the site;
- (d) The mapped fault at the wind farm site;
- (e) Areas of high landslide susceptibility within the site;
- (f) The high density of drainage channels throughout the site, both natural and man-made;
- (g) The timing of construction works outside of the breeding season for birds coinciding with wetter periods;
- (h) The areas of trees to be clear felled, with peat soils and subsoils subsequently exposed;
- (i) The water crossings and crossing upgrades required;
- (j) The existence of deep peat at turbine locations and along existing and proposed access roads;
- (k) The significant volumes of peat and other spoil material requiring excavation, handling, storage and management on the site;

- (l) The instability associated with the works and movement of waste material, including the necessity for placement of substantial volumes of waste peat and other spoil materials in two large repositories on bogland hilly terrain;
- (m) The construction of high retaining stone buttresses required to contain waste peat and other spoil;
- (n) The peat-dominated nature of the soils at the repository locations;
- (o) The lack of a clear understanding of the land and ground conditions associated with the development of the proposed spoil repositories, including matters relating to the final construction of the repositories, the drainage of the peat repositories, measures required for the control of groundwater, the type and condition of rock at the repository locations, the hillside siting of the repositories, and the associated clear felling of forestry;
- (p) The construction works culminating in interference with the natural terrain by the development of the turbine bases and the hardstanding areas, the construction of access roads cutting across contours on bogland, the provision of preferential flow paths for surface waters, and road widening and improvement works along existing internal roads;
- (q) The proposed highly complex system of drainage and the very precise nature of the application of many of the proposed measures required for their safe functionality on a blanket bog dominated site; and
- (r) The destabilising impacts of the proposed engineered drainage works,

it is considered that, due to the elevated risk of failure to contain the spoil in the proposed repositories and to the uncertainty and likely inadequacies of the site drainage provisions as a result, the proposed development would pose a serious threat to the environment, potentially causing extensive pollution of waterbodies within and in the vicinity of the site. The Board is not satisfied that the proposed repositories would be effective in providing for the permanent retention of peat and other spoil materials and that the mitigation measures, inclusive of the proposed complex drainage system, would be adequate to ensure the protection of the environment. Therefore, it is considered that the proposed development

would present a significant risk of adverse environmental impact on the sensitive natural habitats of the site and of the wider area, constituting an unacceptable risk of pollution of watercourses in the area and seriously injuring the amenities of property in the vicinity. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

2. On the basis of the information on file, the Board is not satisfied that the proposed development, either individually or in combination with other projects, would not be likely to have a significant effect on the European Sites Lough Swilly Special Area of Conservation (Site Code: 002287), Lough Swilly Special Protection Area (Site Code: 004075), Lough Foyle Special Protection Area (Site Code: 004087), and Lough Foyle Special Protection Area (Site Code: UK9020031). In such circumstances, the Board is precluded from granting permission for the proposed development.
3. The site of the proposed development is located within an area of significant ornithological value, notably for the volume of activity of Annex I species including Hen Harrier, White-tailed Eagle, Golden Plover and Merlin and for Goshawk (amber conservation status), as evidenced by the applicant's bird surveys in support of the application. Furthermore, a wide variety of fauna is prevalent on and in the immediate vicinity of this site, including several bat species.

The objectives of Donegal County Development Plan include to protect, sustainably manage and enhance the rich biodiversity of the county for present and future generations (Objective NH-O-1) and to maintain and restore ecosystems and to conserve valuable or threatened habitats and species in order to prevent further loss of biodiversity (Objective NH-O-10).

It is considered that the siting, height, scale and operation of the proposed turbines would result in a loss of habitat, disturbance and displacement for Annex I bird species, inclusive of Hen Harrier, White-tailed Eagle, Golden Plover and Merlin, as well as significant risk of collision. Also, the proposed development would result in the potential for high collision risk for bats at several locations

within the site. In addition, it is considered that the cumulative impact of wind turbines in the immediate vicinity, together with the proposed development, would substantially erode the quality of the natural environment for these sensitive bird and bat species, including distorting migratory routes, eroding habitat, encroaching on foraging areas, and affecting roosting and breeding sites. The proposed development would, thus, have significant adverse impacts on the ornithological importance of the area and on bats by way of collision, mortality, disturbance and displacement, would be incompatible with the objectives of Donegal County Development Plan, and would, therefore, be contrary to the proper planning and sustainable development of the area.

4. The area of the site in which most of the turbines associated with the proposed development is located is an area designated an Area of High Scenic Amenity in Donegal County Development Plan 2018-2024, a landscape which the Plan recognises to be of significant aesthetic, cultural, heritage and environmental quality, unique to its locality and a fundamental element of the landscape and identity of County Donegal. It is a provision of the Plan that Areas of High Scenic Amenity have the capacity to absorb sensitively located development of scale, design and use that will enable assimilation into the receiving landscape and which does not detract from the quality of the landscape. It is an objective of the Plan to protect, manage and conserve the character, quality and value of the landscape having regard to the proper planning and development of the area, including consideration of the scenic amenity designations of the Plan, the preservation of views and prospects and the amenities of places and features of natural, cultural, social or historic interest (Objective NH-O-5).

Policies of the Plan include:

- Within areas of 'High Scenic Amenity', it is the policy to facilitate development of a nature, location and scale that allows the development to integrate within and reflect the character and amenity designation of the landscape (NH-P-7);
- To safeguard the scenic context, cultural landscape significance, and recreational and environmental amenities of the County's coastline from inappropriate development (NH-P-8);

- To manage the local landscape and natural environment by ensuring any new developments do not detrimentally impact on the character, integrity, distinctiveness or scenic value of the area (NH-P-9);
- To protect, conserve and manage landscapes having regard to the nature of the proposed development and the degree to which it can be accommodated into the receiving landscape. In this regard the proposal must be considered in the context of the landscape classifications, and views and prospects contained within the Plan and as illustrated on Map 7.1.1: 'Scenic Amenity' (NH-P-13);
- To safeguard prominent skylines and ridgelines from inappropriate development (NH-P-15); and
- To seek to preserve the views and prospects of special amenity value and interest (NH-P-17).

The site of the proposed development is in a location visually prominent from areas of significant tourism and amenity value and from routes from which there are scenic views designated in the Donegal County Development Plan.

Having regard to:

- The height and scale of the proposed wind turbines,
- The siting on elevated ridgelines,
- The highly prominent skyline nature of the wind turbines,
- The siting within an Area of High Scenic Amenity, the inability to assimilate the proposed development into the receiving landscape, and the consequent detracting from the quality of the landscape,
- The high level of visibility of the proposed turbines over an expansive area, including from Areas of Especially High Scenic Amenity,
- The prominence of the proposed turbines from designated scenic views, which form an integral part of the tourism resource of the area, and
- The cumulative impact with extensive wind farm development in the immediate vicinity and, in particular, the substantial infilling of turbines arising between existing and permitted wind farms at this location,

it is considered that the proposed development would constitute a highly obtrusive development that would:

- detract from the existing natural character of the area,
- erode the natural landscape and visual quality of the Area of High Scenic Amenity,
- distort the visual qualities of protected views,
- adversely impact on the rural character of the area,
- exacerbate the cumulative impact of wind farm development from tourist routes and amenity areas, and
- would otherwise compromise the scenic amenities of this visually sensitive and vulnerable area.

The proposed wind turbines would, thereby, comprise excessively dominant features and a visually obtrusive form of development in this landscape, which would contribute to the erosion of the visual and environmental amenity of the area, would materially conflict with the policies and objective as set out in the Donegal County Development Plan, and would seriously injure the landscape and visual amenities of the area. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

Note: The Board will note my concerns relating to the inadequacy of information relating to the intended curtailment strategy for adverse noise impacts that would result for residential properties, the potential utilisation of alternative turbine technologies to update noise assessment, and measures to address potential low frequency noise and amplitude modulation. I consider the above reasons to be the significant planning reasons for not permitting the proposed

development. The Board may wish to consider the inadequacy of the application on addressing these noise concerns in its decision.

I confirm that this report represents my professional planning assessment, judgement and opinion on the matter assigned to me and that no person has influenced or sought to influence, directly or indirectly, the exercise of my professional judgement in an improper or inappropriate way.

Kevin Moore
Senior Planning Inspector

24th April, 2024