



An
Bord
Pleanála

Inspector's Report

ABP-312385-22

Development

A 10 year permission for an amended wind farm development (PL05B.237656) for 8no. turbines. An Environmental Impact Assessment Report (EIAR) and Natura Impact Statement (NIS) accompanies this application.

Location

Graffy, Meenamanragh, Dalraghan More, Glenties, Meenagrubby, Tievebrack Banganboy, Stracashel, Drumconcoose, Drumnalough, Lugaveen, Glenties, Co. Donegal.

Planning Authority

Donegal County Council

Planning Authority Reg. Ref.

2151990

Applicant(s)

Cuilfeach Teoranta

Type of Application

Permission

Planning Authority Decision

Refuse Permission

Type of Appeal

First Party

Appellant

Cuilfeach Teoranta

Observers

1. Cllr. Anthony Molloy
2. Patricia Sharkey
3. Anne Marie O' Donnell
4. Dr M J Cooke
5. Irish Red Grouse Association
Conservation Trust (IRGACT)
6. Adrian Gallagher
7. The Graffy Environmental
Group
8. Anne McLean
9. Moira Miller
10. Mary Brown
11. Jarlath Winters (Glenmore
Rivers Fishery)

Date of Site Inspection

13th May 2022

Inspector

Máire Daly

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1.0 Site Location and Description

- 1.1. Extending over a distance of c. 7.7km from east to west, the appeal site is located in a scenic rural area in Midwest County Donegal with the western extremity of the site c.2.9km north east of the town of Glenties. The proposed turbines are located approximately 8km east, northeast of Glenties.
- 1.2. The application site has a stated area of c. 46.191ha and is located on the southern side of the Aghla Mountain (589 OD) which occupies the area to the northwest of Glenties. Croveenananta (476 OD) lies to the south with Boulypatrick (429 OD) to the east and Derkbeg Hill (332 OD) to the west. The site slopes from north to south and is characterised by mountainous terrain intersected by river valleys, with the subject site area located within the upper catchment of the Stracashel and Stranagoppoge Rivers. Both rivers are directly connected with Natura 2000 sites (Special Areas of Conservation (SACs)). The site varies in elevation from 120m OD to 310m OD and is drained by a number of streams that discharge into the rivers. The land is generally elevated and undulating to the north with rock outcrops and thin soils. Thicker peaty soils are more prevalent to the south. The land uses range from rough grazing with some conifer plantations and turf cutting. Proposed Turbine numbers 3, 4, 5 and 6 are to be located on the edge of the conifer plantation at Min na Manrach and turbine no.1 is to be located within the existing plantation at An Dearachán Mór. The remaining 3 no. turbines are to be located in open exposed areas of blanket bog and rough grazing. Direct access to the site is provided by a network of local roads, with the L-6743-2 local road running through the site.
- 1.3. The surrounding area is characterised by a generally dispersed settlement pattern with isolated farmsteads and houses on the foothills. More concentrated development is found in the lower Stracashel valley to the east and west of Graffy Bridge, on the lower slopes of Mully Hill and at Greenans to the south. The settlement pattern from Glenties towards Edenfinreagh is dominated by single houses on the northern side of the regional road. The proposed turbines are to be located on lands designated as Especially High Scenic Amenity under the operative Donegal County Development Plan 2018-2024. The land use is primarily rough grazing for sheep. Conifer plantations are widespread in the area, with forestry within the central part of the site and adjacent to the eastern site boundary. There is

evidence of small scale historic turf cutting at the site and active turf cutting is occurring in the general area, particularly at the low-lying elevations.

- 1.4. The proposed substation and control building site comprises an area of c. 0.3ha with access from the nearby local road (L-6743-2) to the south of Aghla Mountain and near the location of proposed turbines nos. 7 and 8. The proposed grid connection to the ESB Tievebrack substation follows local roads L-6743-2 and L-2593-2 to the east towards the R250. The eastern-most 2km of the grid connection follows a forestry road, passing a mink farm.

2.0 Background to Project

- 2.1. In September 2010, Donegal County Council granted planning permission (P.A. Ref. 09/30520) to PJ Molloy for a wind park in the townlands of Graffy, Meenaleenaghan, Dalraghan More, Meenamanragh, Meenavale, Greenans, Stralinchy & Mully for the development of 19 turbines, a control building, ESB substation and compound and associated site roads and works. The decision was appealed and by its decision dated 11th February 2011 (PL 05B.237656), An Bord Pleanála granted the development of 13 turbines and associated works. The planning permission was acquired by Cuilfeach Teoranta, although the permission had just expired in February 2021. To take account of newer and more efficient wind turbine technologies, which have become available since the original development was granted, it is now proposed to develop and repower the wind park by reducing the number of turbines to eight (8) larger and more efficient turbines.

3.0 Proposed Development

- 3.1. The proposed development can be summarised as follows:
 - A ten-year planning permission is sought, as well as a 30-year operational life for the development from the date of commissioning for the development of 8 no. wind turbines. The turbine models assessed for the development are the Enercon 126 and the Nordex 133 and their specification measurements are set out below in Table 3.1. The proposed turbines typically turn at between 6 and 18 revolutions per minute (rpm) depending on wind speed. Only one type of either of the identified turbine models below is to be erected:

Table 3.1: Turbine models assessed for the development.

Turbine Model	Hub Height	Rotor Diameter	Blade Tip Height
Enercon 126	85.94 metres	127 metres	149.44 metres
Nordex 133	83 metres	133.2 metres	149.6metres

- The power output in MW is identical for each of these two turbine options as power output is fixed by the grid connection offer at 35.88MW or 4.48MW power turbine maximum output.
- Turbine foundations typically 22m in diameter and approximately 2.7m high.
- Level hardstanding areas between 3,300m² and 4,300m² will be created adjacent to each turbine location. This area will accommodate cranes during the assembly of the turbine.
- Internal cabling - underground 20kV cable will link each turbine with the proposed wind farm substation.
- The development of a permanent lattice galvanised steel meteorological mast, 80 metres high with concrete foundation approximately 10m in diameter and 2m high.
- Site substation c.40m x 56m and surrounded by a 2.3m high palisade fence.
- A temporary construction compound extending to 1,393m² is proposed adjacent to the proposed substation site, surrounded by a 2.3m-high security fence.
- Approximately 4.5km of access road will be required to service the wind farm generally to be of conventional road construction and if considered necessary floating roads. An additional section (734m) of transport route upgrade will be required for the local road L-6733-1.
- In total the route will require 50 culvert crossings (13 no. in Section 1 and 37no. in Section 2) and 3 crossings using horizontal directional drilling (HDD) (1 no. in Section 1 and 2 no. in Section 2). The route will also require the installation of a total of 11 joint bays.

- Horizontal Directional Drilling (HDD) is proposed in 3 no. locations of the GCL. These include under the Stracashel River, within Section 1 of the GCL, where the existing access track crosses this watercourse via a slab bridge; under a tributary to the Stracashel River, within Section 2 of the GCL, along the L-2593-2 local road, where a triple culvert supports high volume flows; and under another tributary to the Stracashel River, within Section 2 of the GCL, along the L-2593-2 local road crosses this watercourse via a slab bridge.
- Peat recovery areas.
- Upgrade works, such as strengthening of the soft margin, support / reinforcement to culverts along the local roads leading to the wind farm site will be required. In addition, replacement of culverts along the grid connection route, apart from those watercourse crossings, which will be achieved by horizontal direct drilling (HDD) may also be carried out, depending on the stability of the existing culverts.
- Proposed underground 110kV grid connection to extend for c.7.5kms westwards from the substation/control room location at Meenagrubby, to the Tievebrack Eirgrid station at Drumnalough. This will be installed in ducting with a trench approximately 1.25m deep and 0.6m wide and will follow the local roads L-6743-2 and L-2593-2 eastwards towards the regional road R250.
- Due to turning limitations, a new road, traversing Coillte forestry is required adjacent to the junction of local roads L-2023-1 & L-6733-1 approximately 5.5kms to the northeast of the wind park. In addition, Turbine T1, a section of the grid connection route and a turbine track between turbines T4 and T5/T6, are also within Coillte commercial forestry lands. Finally easing of bends to facilitate turbine delivery will encroach on Coillte property.
- As part of the above 6.656 ha of trees will require felling. Alternative lands (8.9ha) have been acquired at Sonvolaun, Co. Mayo, of which (6.82ha) has an afforestation licence approval. These lands will be presented to the Forestry Service, as part of the tree felling licence application.

- 3.2. In addition to the standard contents, the planning application was accompanied by an Environmental Impact Assessment Report (EIAR) with multiple appendices, including a Book of Photomontages, a Natura Impact Statement (NIS) and letters from parties stated to be the relevant owners of lands pertaining to the site and consenting to the submission of the application.
- 3.3. The Board should note that as part of the appeal the applicant has submitted additional confidential information in Confidential Appendix D which includes the Merlin flight records and map locations of nesting sites for the years 2019 and 2020, and also Merlin record tables.

4.0 Planning Authority Decision

4.1. Decision

- 4.1.1. The planning authority decided to refuse to grant permission for the proposed development for five reasons, which can be summarised as follows:

Reason 1 – Despite the commencement of the Donegal County Development Plan 2018-2024 variation process in relation to wind energy generation policy, in the interim the council consider that they are not in a position to adequately assess wind energy proposals in the absence of current Development Plan policy and National Guidelines for wind energy;

Reason 2 – The location of the subject site on lands designated in the County Donegal Development Plan, 2018-2024 (as varied) as ‘Especially High Scenic Amenity’ (EHSA). To permit the proposed development would therefore be contrary to Policy NH-P-6.

Reason 3 – Insufficient detail has been submitted in respect of the potential impacts of the development in relation to Salmon and Freshwater Pearl Mussel which are Qualifying Interests of the West of Ardara/Maas Road Special Area of Conservation (site code 000197) and the River Finn Special Area of Conservation (site code 002301). The potential risks to Salmon and Freshwater Pearl Mussel associated with the project are very high and in the absence of definitive conclusions that eliminate reasonable scientific doubt as to the absence of such risk, to permit the

proposed development would therefore be contrary to Policy NH-P-1 of the County Donegal Development Plan, 2018-2024 (as varied).

Reason 4 - The information submitted within the EIAR and the NIS is deficient as it does not contain a scientific assessment on whether the Merlin pair recorded in 2019 and 2020 form a significant portion of the populations that support the adjacent Lough Nillan Bog Special Protection Area (SPA) and Derryveagh to Glendowan SPA. The information submitted fails to address the likely significant effects of the proposed development to Merlin populations in the aforementioned European sites. To permit the proposed development would therefore be contrary to Policy NH-P-1.

Reason 5 – On the basis of the information submitted in support of the application and specifically within the Environmental Impact Assessment Report in respect of the Golden Eagle and the White Tailed Eagle, both of which are classed as having ‘high sensitivity to wind farm developments’, the Planning Authority considers that potential risks to the aforementioned Annex I species have not been adequately addressed in the form of scientific evidence and conclusions. To permit the proposed development would therefore be contrary to Policy NH-P-1 of the aforementioned Development Plan.

- 4.1.2. An Advice Note attached to the Notification of Decision to Refuse also stated that the ‘Applicant is advised that the Council’s Roads Department has noted in a report to the Planning Authority that the Roads Section does not intend to facilitate proposals for installing HV cables in the local roads Network’.

4.2. **Planning Authority Reports**

4.2.1. **Planning Reports**

The main points of the planner’s report can be summarised as follows:

- There is no current valid permission pertaining to the site. The previous permission has expired, and the previous permitted windfarm was not developed. The reference to repowering/redeveloping is therefore not relevant in the consideration of the proposal and it is therefore being considered as a new application.

- In the absence of wind energy policies and objectives in the County Development Plan (CDP) 2018-2024 (as varied) a summary of relevant national and regional policy is set out by the area planner which includes reference to the National Planning Framework – Policy Objective 55 and National Strategic Outcome 8. In addition, reference is also made to the Wind Energy Development Guidelines for Planning Authorities 2006 and updated Draft Guidelines, 2019. The National Climate Change Adaptation Framework, 2019, The Climate Action plan (2019) and the Regional Spatial and Economic Strategy are also referred to.
- With regard to national and regional planning policy it is considered that the principle of the proposed development is aligned with policy and is acceptable in this regard, however due to a lacuna of wind energy policy in the County Development Plan pending a material variation to said Plan to include updated Wind Energy Development Guidelines, the development is considered to be premature and refusal is recommended.
- EIAR Assessment – Landscape and Visual Assessment – Notwithstanding the current situation in relation to the absence of specific policy in the current CDP, it is considered that there is a material change in the consideration of the proposal on this site having regard to the fact that there is no longer an extant permission on the site and also given that the landscape zoning of the affected lands are designated as Especially High Scenic Amenity in the current CDP. Under the previous permitted application (DCC Ref. 09/30520) the lands were not subject to this EHSA designation.
- Population and Human Beings - It is accepted that no significant impacts on amenities of residential properties will result.
- Noise levels are expected to be in compliance with recommended limits.
- Soils, Geology and Hydrology – the greatest concern is noted as being that of a peat landslide and following a risk assessment this is deemed to be very low with mitigation proposed to minimise potential impacts.

- Hydrology – A comprehensive suite of mitigation measures in accordance with best practice is proposed to protect water quality during the construction phase.
- Air Quality – Indirect impacts may be caused by construction traffic and dust emissions. In terms of greenhouse gas emissions however it is noted that the generation of 100GWh of electricity to the national grid during the operational phase will lead to a net saving for the development.
- Terrestrial Biodiversity – Area planner noted that the NPWS were not satisfied with the information submitted in respect of bird studies carried out and the conclusions presented. Potential impacts on national population of breeding golden eagle and probable breeding of white tailed eagle,
- Natura impact Statement (NIS) – Concerns focused on three significant risks to nature conservation arising from the proposed project on Merlin populations - qualifying interest for Lough Nillian Bog SPA (site code 0044110) and Derryveagh and Glendowan Mountains SPA (site code 004039), potential impacts to freshwater Pearl mussel and salmon a qualifying interest for the west of Ardara/Mass Road SAC (002301) and River Finn SAC (site code 002301).
- Having regard to the deficiencies as highlighted by the NPWS in respect of the NIS and EIAR and having regard to the location of the proposed development on EHSA lands and in the absence of policy in respect of wind energy development in the CDP, it is recommended that permission for development to be refused.

4.2.2. Other Technical Reports

Matters raised within the technical reports can be summarised as follows:

- Roads Section (Glenties Municipal District) – report dated 18th November 2021
 - It would appear from Drawing no. 19-014-015 that the applicant proposes to install HV cable in the local roads (L-2593 and L-6743) for a length of 4.5km for grid connection purposes. The local road network is essential infrastructure for use of residents of rural areas and the presence of HV

cabling within the road will introduce a significant obstacle to local development accessing existing underground services (water, telecommunications). Future upgrades to such services will also be limited by the presence of the HV cabling. The developer should be advised that the council do not intend to facilitate this proposal of installing HV cables in the local roads network.

- Considering the above a revised plan for the grid connection cable route will have to be submitted for this proposal to be further considered.
- Road Design Office – Report dated 3rd November 2021
 - Further Information requested on following – The site location drawing does not demonstrate the visibility splays. Vision lines to be in accordance with County Development Plan showing vision to nearside road edge.
 - Applicant to agree with Donegal County Council (DCC) access/egress route to and from the site. Consideration is to be given to both construction and local traffic.

Further comments also included in which the developer will be required to include details of:

- Passing bays to be constructed along access route to site.
- Design and specification of all road improvements to be built to approved standards and agreed with the area engineer of DCC in advance.
- Detailed information to be given in regard to entrances or internal road layout.
- No works to negatively impact on existing visibility splays.
- Any damage to existing public roads or structures / culverts on the public road to be made good to satisfaction of area engineer.
- Applicant to liaise with local Roads Area Engineer and Gardai with regard to deliveries to site and any necessary permits.
- Any watercourse to be culverted shall require a Section 50 application to the Office of Public Works (OPW). Details of which and consent from OPW are to be submitted as part of further information.

- Surface water from the proposed new development is not to run onto public roads.

4.3. Prescribed Bodies

4.3.1. The main points and recommendations raised by prescribed bodies engaged during consultation for the planning application, can be summarised as follows:

4.3.2. Transport Infrastructure Ireland (TII)

Prior to issuing a decision the following matters require addressing:

Proposed Turbine Haul routes –

- the application identifies the need for temporary works for turbine component delivery at; 1. The junction of the N15/L-2794-1 (the Roadhouse junction), and 2. On the N56 approx. 550m south of Bruckless Bridge due to horizontal alignment. Any proposed works to the national road network and national road junctions shall comply with TII Publications and shall be subject to Road Safety Audit as appropriate.
- Any damage caused to the pavement on the existing national road due to the turning movement of abnormal 'length' loads shall be rectified in accordance with TII Pavement Standards and details in this regard shall be agreed with the Road Authority prior to the commencement of any development on site.
- The Council should address the provision of traffic control measures during the transportation of oversized loads to ensure that the strategic function of the national road network is safeguarded.

Structures –

- An abnormal load assessment should be undertaken to assess the impact of any abnormal weight loads where the load weight falls outside the limits allowed by the Road Traffic (Construction Equipment & Use of Vehicles) Regulations 2003, SI 5 of 2003.
- Where abnormal weight loads are proposed, all structures should be checked by the applicant/developer to confirm their capacity to accommodate any abnormal weight load proposed, where relevant.

Grid connection – Noted that proposal does not impact national road network.

4.3.3. Department of Housing, Local Government and Heritage (DHLG&H)

The Department's concerns are focused on three significant risks to nature conservation arising from the proposed project. These are described in more detail as follows:

1. Potential impacts to Merlin populations, a qualifying interest for Lough Nillan Bog Special Protection Area (SPA) (site code 004110) and Derryveagh and Glendowan Mountains SPA (site code 004039).
 - Merlin is an SCI species for both the Lough Nillan Bog SPA and Derryveagh and Glendowan Mountains SPA located in close proximity to the proposed development (<4km) and within 6km of the nest site in the case of Lough Nillan Bog SPA. The NIS indicates that a pair of Merlin were recorded breeding within the 2km (~600m) turbine buffer area in both the 2019 and 2020 breeding seasons. These Merlin nesting locations were 5.2km (2019) and 5.1km (2020) respectively from the Lough Nillan Bog SPA boundary at its closest point. Furthermore, the NIS specifically acknowledges that the recorded breeding pair of this species on site are likely to be vulnerable to aerial noise and visual disturbance at the construction stage of the proposed development. In addition, the avifauna section of the Biodiversity chapter (10 ii) of the EIAR (pg 39) identifies specific risk of disturbance to, or displacement of, the merlin pair breeding at the windfarm site and states that this is likely to put pressure on neighbouring pairs in terms of nest site and home range competition
 - Having considered the NIS and EIAR submitted with the application the Department highlights that Percival (2003) suggests the following in interpreting the significance ratings outlined in the department's submission: Very high significance and high significance represent a highly significant impact on bird populations and would warrant refusal of a planning proposal. Within this context, the Department considers the NIS to be deficient because it does not contain a robust scientific assessment (i.e. confidence levels) of whether the Merlin pair recorded in 2019 and 2020 within 6km of the Lough Nillan SPA form part of, or support the

Qualifying Interest population (N=5 pairs) for that European site. Moreover, there is no assessment of what effect displacement of a breeding pair would have on the integrity of the Merlin populations for the two European sites concerned.

The Department recommends that further information is provided:

1. In the interest of determining any likely significant effects on European sites, the applicant should address the likely significant effects to Merlin populations in Lough Nillian Bog and SPA (004110) and Derryveagh and Glendowan Mountains SPA (004039). The Department emphasises that the level of detail provided must eliminate reasonable scientific doubt as to the absence of such effects¹.
 2. In the interest of determining effects to the core foraging areas for breeding Merlin, the applicant shall map the principal flight lines and quantify the proportion of foraging events undertaken on each flight line and identify those flight lines that are located outside and inside the 500m buffer zones surrounding the proposed turbines as recorded by bird surveys undertaken on site.
2. Potential impacts to a significant proportion of the national population of breeding Golden Eagle and probable breeding White Tailed Eagle (both Annex I Birds Directive species).

The Department stated that when they consider the efforts and resources that Ireland has and continues to invest in the reintroduction and establishment of White-Tailed Eagle throughout Ireland, the modelled risk of mortality associated with this project is a significant concern. The collision risk model indicates that the proposed wind farm development will result in complete loss of the identified White Tailed Eagle pair and potentially the loss of another half pair over the 25-year lifetime of this consent.

Furthermore, the range and frequency of raptor activity within the development site (e.g. Merlin, Golden eagle, WT eagles, Kestrel, Sparrow hawk and Buzzard)

¹ Case 243/15 Lesoochránárske zoskupenie VLK v. Obvodný úrad Trenčín EU:C:2016:838

indicates that the proposed development site supports a high density and variety of prey species (i.e. beyond dead sheep) and is in favourable condition.

Both eagle species are classed as having high sensitivity to wind farm developments and the Department again highlights Percival's (2003) interpretation of significance ratings, as previously outlined above in the case of Merlin also.

3. Potential impacts to Fresh Water Pearl Mussel and Salmon a qualifying interest for the West of Ardara/Mass road SAC (002301) and Salmon a qualifying interest for the River Finn SAC (site code 002301).

The proposed development lies partially within and is hydrologically connected to a number of European sites, namely the West of Ardara/Maas Road SAC, River Finn SAC, the River Foyle and Tributaries SAC. A total of 47,972m³ of peat and topsoil substrates will require the excavation, storage and disposal and the Department has expressed concerns regarding the potential risks arising from peat slippage and siltation of water courses as a result. The recent Meenbog Peat Slippage indicates that dilution over distance is not an adequate mitigation technique for preventing impacts to water quality and or habitat deterioration for Salmon. The Stranagoppoge River, Stracashel River, River Finn and Owenea River support salmon, and these watercourses, which form a part of the West of Ardara/Maas Road SAC or River Finn SAC are considered to be highly sensitive to potential impacts arising from the proposed development.

With regard to Freshwater Pearl Mussel (FWPM): Lengths of the Stracashel River and Owenea River support populations of freshwater pearl mussel, a qualifying interest of the West of Ardara/Maas Road SAC that is located downstream from the proposed development. These populations are considered to be in sub-optimal condition and highly sensitive to upstream development, specifically, siltation. In this regard the Department considers that the NIS contains inadequate details with regard to 1. Distance of drill launch and receiver pits from watercourses and associated mitigation. 2. Frac-Out plan, response actions and assessment of associated environmental risks and impacts.

In summary, the potential risks to Salmon and FWPM associated with the project are high.

Archaeology

The Department concurs with the recommendation as outline in Section 9.9 of the submitted Archaeological Assessment Report.

It is recommended that archaeological monitoring be carried out on all groundworks associated with construction of the wind farm. It is also recommended that a written and photographic records be created of the 8 no. townland boundaries that will be impacted on. The written and photographic records should be created in advance of groundworks commencing on site. The above recommendations, as well as the archaeological monitoring specifications as outlined in the submission, should be included in any grant of planning permission that may issue.

4.3.4. Inland Fisheries Ireland (IFI)

- Necessary measures in relation to fuel storage on site, as well as the operation and maintenance of machinery are outlined (100m buffer from any watercourse);
- Bridged or culverted watercourse crossings should only be used;
- Advice is provided regarding the maintenance of stream profiles, avoiding shooting velocities;
- Piling may be considered at turbine bases with deep peat and within 50m or more of watercourses;
- Specific requirements for roadside treatments, embankments (including added stabilisation if required), silt traps and settlement ponds and construction activities are outlined;
- Track rutting by machinery movement must be kept to a minimum and no discharge or run off containing high sediment loads must occur from the site. Any stockpiling of peat or other site materials will require careful management.

- A construction methodology is recommended prior to any works commencing and site preparation and construction must adhere to best practice and conform to the publication “Requirement for the Protection of Fisheries Habitat during Construction and Development Works at River Sites”.
- Monitoring of surface water flows during construction is essential and measures should be extended into the operational phase;
- Full implementation of the mitigation measures as identified in the NIS, EIAR and CEMP is a requirement and must be referred to by way of condition.
- The likely increase in surface water flow from the site needs to be addressed via identified and implemented attenuation measures;
- The presence of invasive species needs due consideration and appropriate action;
- A suitably qualified person should oversee the construction works to ensure implementation of mitigation measures, to continually monitor peat stability, to address slippage, to ensure compliance with the peat restoration plan and to provide for the establishment of contact protocols.

4.3.5. Department of Defence

- Where permission is granted, a condition should be attached requiring warning lighting (of type specified in response) to be fitted to turbines.

4.3.6. Irish Aviation Authority (IAA)

- Applicant should be required to engage with Donegal Airport to undertake a preliminary screening assessment to confirm that the proposed wind farm and associated cranes that would be utilised during its construction would have no impact on instrument flight procedures at the airport.
- In the event that planning consent is obtained, the applicant should be conditioned to contact the IAA to agree the following:
 - An aeronautical obstacle warning light scheme for the wind farm development.
 - Provide as constructed coordinates with ground and tip height elevations at each turbine location.

- Notify Donegal airport and the IAA at least 30 days prior to commencing crane operations.

4.4. Third Party Observations

4.4.1. A total of 37 submissions were received by the planning authority from concerned local residents, local community groups and other individuals. The issues raised in the submissions are also covered within the appeal. The issues can be collectively summarised under the headings below:

- Visual impact and impacts on the location which is in an EHSA.
- Risk of potential bogslides.
- Health concerns relating to windfarm development.
- Concerns in relation to impacts on wildlife, including habitats and bird species.
- Impact on Tourism.
- Resultant impact of noise and shadow flicker on nearby residents and farms.

5.0 Planning History

5.1. Appeal Site

- ABP Ref: PL 05B.237656 – Permission granted in February 2011 for the construction of a wind farm comprising 13 no. wind turbines, control building, compound, access and all associated site works. (Note originally 35 no. turbines were proposed on site, 19 were subsequently proposed under revised plans submitted and in total 13 turbines were permitted by the Board on site). This planning permission expired on 10th February 2021.
- ABP Ref: 05VA0003 – Permission granted by the Board in October 2009 for a 110kV line connecting Binbane 110kV station to Letterkenny 110 kV station, new switching station on proposed Binbane-Letterkenny line and new 110kv

line from proposed switching station to new 110kv. This line passes through the site at the area of the access road to EirGrid Station, Tievebrack.

5.2. Appeal Site – Other relevant history:

- Donegal County Council Planning Ref; 21/51202 - A planning application was submitted to the Planning Authority on 16th June 2021, but was withdrawn following a High Court JR decision (Sweetman V ABP [2021] IEHC 390), which determined that there was inadequate detail in respect of design and in particular, that the turbine heights and blade lengths were expressed in terms of maxima, not the actual proposed dimensions. As the submitted application, 21/51202 confirmed maxima dimensions for the wind turbines, it was decided to withdraw the application and re-submit with specific turbine dimensions

5.3. Surrounding Area:

- ABP Ref: PL 05B.229430 – Permission granted in January 2009 for a meteorological mast to the southwest in the townland of Tangaveane.

5.4. Pre-Application Consultation Request - Withdrawn

- 5.4.1. Pre-application request made by current applicant under ABP Ref. VC05E.309351 for wind energy project including 8 turbines, substation and grid connection (110kv) from the proposed substation to the Tievebrack Eirgrid station at Drumnalough with proposed overall capacity output of 52.8MW – Withdrawn in July 2021.

5.5. Similar Applications

- 5.5.1. Multiple wind energy planning applications, including SID applications (under Section 37 of the Planning and Development Act 2000, as amended) have been decided or are under consideration by the Board for the Donegal area and a selection of recent relevant cases is set out below. This does not purport to represent an exhaustive list of wind energy cases in Donegal or the wider area.
- ABP Ref. 308806 – Application at time of compiling this report (July 2022) is currently with the Board for decision - Planning application for Strategic

Infrastructure Development under Section 37E of the P&D Act, 2000 as amended, sought for the construction of 12 wind turbines with an output of 50MW, including 110kV transmission substation in the townlands of Treankeel, Meenadaura, Carrickalangan and Cark in an upland area of central County Donegal, north of Cloghan village and southwest of Letterkenny.

- ABP Ref. PL05E.306303 – Permission granted in January 2021 for SID application for decommissioning and removal of 25 wind turbines and the construction of up to 13 wind turbines and all associated site development and ancillary works, including upgrade works associated with the existing 110kV grid connection and the widening of a junction and a local road at Keadew Upper, Cullinoboy and Clogher townlands.
- ABP Ref. PL05E.305163 – Permission refused in November 2020 for 10 year planning permission for a seven turbine wind farm with a 30-year operational life and associated development. An EIAR and a NIS accompanied the application. The development was a transboundary application. Reason - The Board is not satisfied, based on the details submitted with the application and the appeal, notwithstanding the mitigation measures set out to address the impacts on Hen Harrier, that the proposed development, by itself and in conjunction with the permitted Derrykillev Community Wind Farm development, would not have a significant adverse impact on Hen Harrier. It is considered that the proposed development would be contrary to objectives NH-O-1 and NH-O-10, and policy NH-P-5, of the Donegal County Development Plan 2018-2024.
- ABP Ref. PL05E.304685 - Permission was refused by the planning authority in May 2019 for a six wind turbine project with overall tip heights of up to 135m and all associated infrastructure, structures and services on a site at Momeen and Lettergull, 4.5km northeast of Raphoe, in the east of the county, due to a lacuna in wind energy policy and the implications of the project for the N14 national road scheme. An Bord Pleanála subsequently granted permission in July 2020 for the development, including a condition omitting two of the turbines;
- ABP Ref. PL05E.305861 - following refusal of planning permission by the planning authority in October 2019 for a six wind turbine project with overall

tip heights of up to 124.5m and all associated infrastructure, structures and services on a site at Quigley's Point on the Inishowen peninsula, due to a reason relating to a lacuna in wind energy policy. A first-party appeal of this decision was lodged to An Bord Pleanála. In September 2020 the Board decided to defer consideration of this case and to issue a Section 132 notice to the applicant. Following receipt of additional information the Board granted permission in April 2021.

6.0 Policy Context

6.1. Introduction

- 6.1.1. Selected renewable energy, climate change and planning policy documents from a European, National, regional and local perspective are outlined below. Chapter 1 of the EIAR submitted provides detailed and extensive further information relating to the policy context for wind energy developments in Ireland.

6.2. National Policy and Guidance

National Planning Framework and National Development Plan

- 6.2.1. The National Planning Framework (NPF) 2018 identifies the importance of climate change in National Strategic Outcome (NSO) 8, which relates to ensuring a 'Transition to a Low Carbon and Climate Resilient Society'.
- 6.2.2. National Policy Objective 55 seeks to 'Promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050.'
- 6.2.3. The National Development Plan (NDP) 2021-2030 sets out the investment priorities that will underpin the implementation of the NPF, one of which is climate action, the plan commits to increasing the share of renewable electricity up to 80% by 2030. This is an unprecedented commitment to the decarbonisation of electricity supplies.

Climate Action Plan 2021

- 6.2.4. The Climate Action Plan follows the Climate Act 2021, which commits Ireland to a legally binding target of net-zero greenhouse gas emissions no later than 2050, and

a reduction of 51% by 2030. Among the most important measures in the plan is to increase the proportion of renewable electricity to up to 80% by 2030. Notably Section 11 Electricity of the Plan provides a Key Performance Indicator (KPI) of providing 8 GW Onshore wind by 2030.

National Raised Bog SAC Management Plan 2017-2022

- 6.2.5. This Plan identifies the importance of undrained raised bogs as a carbon store, it notes that 53 raised bog sites have been designated as SACs, and it sets out a series of protection and restoration measures which could enhance their carbon sequestration capacity in the future.

National Peatlands Strategy, 2015

- 6.2.6. This document sets out a national strategy for the sustainable management of peatlands and Section 5.3 deals with Peatlands and Climate Change. It describes the role of natural undrained peatlands as carbon stores, and it references the EPA report Carbon Reserve -The Potential of Restored Irish Peatlands for Carbon Uptake and Storage 2007-2013 in terms of how peatland management might be used to enhance carbon sequestration and reduce emissions. It provides advice in relation to the management of non-designated peatlands to halt carbon loss and recommends restoration measures to stabilise eroding surfaces, re-establish peatland vegetation and encourage waterlogged conditions to enable peat formation.

Wind Energy Development Guidelines (2006)

- 6.2.7. The Guidelines advise that a reasonable balance must be achieved between meeting Government Policy on renewable energy and the proper planning and sustainable development of an area and it provides advice in relation to the information that should be submitted with planning applications. The impacts on residential amenity, the environment, nature conservation, birds and the landscape should be addressed. It states that particular landscapes of very high sensitivity may not be appropriate for wind energy development.

Draft Wind Energy Development Guidelines 2019

- 6.2.8. In December 2013, the Minister for Housing and Planning announced a public consultation process with respect to a focused review of the 2006 Guidelines and a 'preferred draft approach' to the review was announced in June 2017.

6.2.9. Consultation on the draft Guidelines ended in February 2020. The draft guidelines identify Specific Planning Policy Requirements (SPPR), and subject to formal adoption of the Guidelines, it is intended that these SPPRs would be applied by planning authorities and An Bord Pleanála in the performance of their functions, as well as having regard to additional matters for consideration in assessing wind energy developments. Notable changes in the draft guidelines when compared with the 2006 wind energy guidelines are summarised as follows:

Noise

- Section 5.7.4 - The “preferred draft approach”, proposes noise restriction limits consistent with World Health Organisation Guidelines, proposing a relative rated noise limit of 5dB(A) above existing background noise within the range of 35 to 43dB(A), with 43dB(A) being the maximum noise limit permitted, day or night. The noise limits will apply to outdoor locations at any residential or noise sensitive properties.

Shadow Flicker

- Section 5.8.1 - The relevant planning authority or An Bord Pleanála should require that the applicant shall provide evidence as part of the planning application that shadow flicker control mechanisms will be in place for the operational duration of the wind energy development project.

Community Investment

- Section 5.10 - The Code of Practice for Wind Energy Development in Ireland Guidelines for Community Engagement issued by the Department of Communications, Climate Action and Environment (December 2016) sets out to ensure that wind energy development in Ireland is undertaken in observance with the best industry practices, and with the full engagement of communities around the country. Community dividend – measures to ensure enduring economic benefit to the community

Visual Impact

- Section 6.4- Sitting of wind energy projects.

Set back

- Section 6.18.1 Appropriate Setback Distance to apply - The potential for visual disturbance can be considered as dependent on the scale of the proposed turbine and the associated distance. Thus, a setback which is the function of size of the turbine should be key to setting the appropriate setback. Taking account of the various factors outlined above, a setback distance for visual amenity purposes of 4 times the tip height should apply between a wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development, subject to a mandatory minimum setback of 500 metres. Policy SPPR 2 – Set back.
- Section 6.18.2 Exceptions to the mandatory minimum setbacks - An exception may be provided for a lower setback requirement from existing or permitted dwellings or other sensitive properties to new turbines where the owner(s) and occupier(s) of the relevant property or properties are agreeable to same, but the noise requirements of these Guidelines must be capable of being complied with in all cases
- Grid connections – underground to be the standard approach.

National Landscape Strategy for Ireland, 2015-2025

6.2.10. This document seeks to integrate landscape into our approach to sustainable development, carry out an evidence-based identification and description of landscape character, provide for an integrated policy framework to protect and manage the landscape and to avoid conflicting policy objectives.

6.3. Regional Policy

Regional Spatial & Economic Strategy for the Northern and Western Regional Assembly

6.3.1. The Regional Spatial and Economic Strategy (RSES) provides a 12-year high-level development framework for the Northern and Western Region that supports the implementation of the National Planning Framework (NPF) and the relevant economic policies and objectives of Government. The Strategy recognises the success of the region in the provision of renewable energy from hydropower and

onshore wind energy, with wind turbines a new feature in the region's landscapes. The significance of the potential for all new energy outputs connecting to the national electricity grid are also recognised, as are the challenges to same, including a new regulatory environment in the guise of wind energy guidelines to replace the 2006 guidelines, and a fit for purpose transmission network.

6.4. Other relevant policy documents

- EU Energy Directives and Roadmaps and associated national targets for renewable energy by sector.
- National Renewable Energy Action Plan 2010.
- Strategy for Renewable Energy 2012-2020 • EU Guidance (2013) Wind Energy Developments and Natura 2000 Sites.
- Ireland's Transition to a Low Carbon Energy Future, DCENR, 2015-2030.
- Renewable Energy Policy and Development Framework. DCENR, 2016.
- Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure, DCENR, 2012.
- EU Directives on Flooding and the Water Framework Directive.
- The Planning System and Flood Risk Management, 2009.

6.5. Local Policy

Donegal County Development Plan 2018-2024 (as varied)

- 6.5.1. Section 8.2 of the Development Plan outlines the aim for energy development in the County, involving the facilitation of development comprising a diverse energy portfolio, including wind and other energy sources. A host of objectives and policies supporting the development of wind energy projects in the County and aimed at controlling the locations and impacts of wind energy developments are also listed within Section 8.2 of the Development Plan. Policies E-P-10 to E-P-21 in particular relate to wind energy development.

Development Guidelines

- 6.5.2. Development guidelines and technical standards for wind energy developments are outlined in Section 6 of Part B to Appendix 3 of the Plan, which lists additional locations where wind energy projects must not be located, including '(c) areas identified as locations where wind farm development would not be acceptable, as identified on map 8.2.1 of the Plan' and '(f) areas within a setback distance of ten times the tip height of proposed turbines from residential properties and other centres of human habitation'. A centre of human habitation is defined in the Plan to include schools, hospitals, churches, residential buildings or buildings used for public assembly.
- 6.5.3. It is understood that in light of both a High Court Order (Record Number 2018/533JR between Planree Limited and Donegal County Council) dated 5th November 2018 and the publication of the Draft Wind Energy Guidelines on 12th December 2019, certain provisions of the Development Plan, comprising Section 6.5 parts (c) and (f) of the Wind Energy standards at Part B: Appendix 3 'Development Guidelines and Technical Standards' and Map 8.2.1, were ordered to be deleted and/or removed from the Development Plan. The Development Plan is to be read in light of this Order pending any possible future variation of same and the planning authority intends preparing a variation to the Development Plan regarding wind energy.
- 6.5.4. Appendix 3: Part B- Wind Energy Development Standards therefore reads as follows:
- Section 6.1 states that wind energy proposals shall be screened for EIA & AA.
 - Section 6.2 lists several matters to be considered (including geological, geotechnical, ecological & visual assessments, and a PSA should be undertaken.
 - Section 6.3 states that there should be no fencing (except around substations etc.).
 - Section 6.4: requires the undergrounding of grid cable connections within the site.
 - Section 6.5: requires compliance with 2006 Guidelines and not located within:
 - (a) The zone of visual influence of the Glenveagh National Park.
 - (b) The zone of influence/flight path at Donegal Airport.

(c) Deleted. (~~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) SACs or SPAs.

(e) The 6 Fresh Water Pearl Mussel catchments for the Sub-Basin Management Plans for Clady, Eske, Glaskeelin, Leannan, Owencarrow and Owenea.

(f) Deleted. (~~A set back distance of ten times the tip height of proposed turbines from residential properties and other centres of human habitation~~).

Landscape Designations

6.5.5. To conserve, protect and manage the County's natural heritage for future generations and encourage appreciation and enjoyment of these resources, Section 7.1 of the Plan categorises the landscape of the County into three areas, as illustrated in **Map 7.1.1** of the Plan, including areas of 'Especially High Scenic Amenity' (EHSA), 'High Scenic Amenity' (HSA) and 'Moderate Scenic Amenity' (MSA), none of which are considered to be of low landscape value.

6.5.6. The locations of the proposed turbines and sub-station of this appeal site are located within an area of 'Especially High Scenic Amenity' (EHSA). The Plan states that "Areas of Especially High Scenic Amenity are sublime natural landscapes of the highest quality that are synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development".

6.5.7. **Policy NH-P-6 (Note: See Section 6.5.18** in relation to the Variation of this Policy adopted by DCC on 18th July 2022) states that 'It is a policy of the Council to protect areas identified as **Especially High Scenic Amenity** on Map 7.1.1: 'Scenic Amenity'. Within these areas, only developments assessed to be of strategic importance or developments that are provided for by policy elsewhere in this Plan shall be considered.

6.5.8. The remainder of the grid connection cable works and the connection to the Eirgrid Station Tievebrack are located within an Area of High Scenic amenity (HSA) – for these areas the plan states "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”.

- 6.5.9. **Policy NH-P-7** of the Plan highlights that subject to other Plan objectives and policies, within a HSA it is policy to facilitate development of a nature, location and scale that allows development to integrate within and reflect the character and amenity designation of the landscape.
- 6.5.10. The plan states that within each of the three landscape classification areas, there may be areas that do not fully meet the definition of the designation and goes on to further states that “Such anomalies in landscape designation shall be considered individually and in the context of all other objectives and policies contained within this Plan, should an application for development be submitted in these areas (excluding wind energy proposals or ancillary works). The onus shall be on the applicant to demonstrate that the site within which it is situated does not meet the characteristics of the landscape within which it is situated and that any development applied for shall not adversely affect the classification and value of the wider landscape”.
- 6.5.11. **Policy NH-P-13** seeks to protect, conserve & manage landscapes having regard to the nature of the proposed development and degree to which it can be accommodated into the receiving landscape.
- 6.5.12. **Policy NH-P-15** states it is a policy of the Council to safeguard prominent skylines and ridgelines from inappropriate development.
- 6.5.13. **Policy NH-P-17** seeks to preserve the views & prospects of special amenity value & interest.....and proposals shall be considered on the basis of their importance, the integrity of the view, the degree of intrusion and material alteration of the view.
- 6.5.14. **Policy NH-P-20** states that it is the policy of the Council to ensure the protection of Cró na mBraonáin habitats and Grouse sanctuary given its high concentration of Red Grouse and its importance to the national Red Grouse population, which is a protected species under the EU Birds Directive.

Biodiversity and Natural Heritage

- 6.5.15. Nature conservation sites: Several SACs, SPAs & NHAs within a 15km radius. The following Objectives and Policies of the Plan are relevant to the subject appeal:

- **Objective NH-O-1** seeks to protect, sustainably manage and enhance biodiversity.
- **Objective NH-O-2** seeks to comply with Article 6 of the Habitats Directive.
- **Objective NH-O-3** seeks to maintain the conservation value of all existing and/or proposed SACs, SPAs, NHAs & RAMSAR sites.
- **Objective NH-O-4** seeks to ensure the protection and management of the landscape in accordance with current legislation, ministerial and regional guidelines and having regard to the European Landscape Convention 2000.
- **Objective NH-O-5** seeks 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
- **Objective NH-O-6** seeks to protect and improve the integrity and quality of Designated Shellfish Waters and FWPM basins. Objective NH-O-10 seeks to restore ecosystems, conserve threatened habitats & species and prevent further loss of biodiversity.
- **Objective NH-O-7** seeks to protect the areas of Especially High Scenic Amenity from intrusive and/or unsympathetic developments.
- **Objective NH-O-10** seeks 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.
- **Objective NH-O-11** seeks to conserve & manage Peatlands.
- **Policy NH-P-1** seeks to ensure that development proposals do not damage or destroy any wildlife sites of international or national importance.
- **Policy NH-P-4** requires the consideration of FWPM & any relevant FWPM Sub-basin plans for all developments that fall within their catchment or basin.
- **Policy NH-P-5** requires the consideration of the impact of potential development on habitats of natural value that are key features of the ecological network.

Variation to the County Donegal Development Plan 2018-2024 (As Varied) in respect of a Wind Energy Policy Framework – Adopted 18th July 2022

6.5.16. This Variation addresses a policy lacuna in the Donegal County Development Plan, 2018-2024 (As Varied) [‘the CDP’] in relation to wind energy. This gap in the CDP’s policy framework was created following a High Court Order made on 5th November, 2018, that removed certain critical provisions of the CDP relating to Wind Energy from that adopted by a resolution of the Members in May, 2018. The public consultation period for the proposed variation ran from 29th April to 3rd June 2022.

The aim of this Variation is to:

- provide a robust evidence based policy framework for the sustainable development of County Donegal’s wind energy resource, in accordance with national legislation and Government guidance.

The variation specifically:

1. Inserts a new Wind Energy Map 8.2.1 identifying areas designated as: (a) ‘Acceptable in Principle’; (b) ‘Open to Consideration’; and (c) ‘Not Normally Permissible’ for wind energy development.
2. Inserts a new policy framework aligned to the three designated areas in Map 8.2.1, and also stipulating setback distance requirements from residential properties.
3. Inserts new background and contextual text updating the legislative framework and guidelines within which windfarm development must be considered.
4. Deletes outdated policies, and background and contextual text.
5. Deletes existing Section 28 statement in respect of Wind Energy Development Guidelines and inserts replacement text.

6.5.17. It should be **noted** that according to the new Wind Energy Map 8.2.1 the current proposal site is located within a ‘Not Normally Permissible’ Area. The proposal is located within an EHSA area.

6.5.18. As part of the variation an amendment to Policy NH-P-6 is proposed - The amendment to this policy reflects that windfarm development within EHSAs have

limited circumstances where they could be considered to be of a strategic importance.

Policy NH-P-6: *It is a policy of the Council to protect areas identified as Especially High Scenic Amenity on Map 7.1.1: 'Scenic Amenity'. Within these areas, only developments assessed to be of strategic importance or developments that are provided for by policy elsewhere in this Plan shall be considered. Without prejudice to the generality of the aforementioned, windfarm developments will not be acceptable in Especially High Scenic Amenity Areas save for:*

- (i.) the limited circumstances set out under the section headed: 'Wind Energy-Context' (para. commencing: 'Map 8.2.1 entitled Wind Energy designates....'), contained within Amendment No.4 above; and*
- (ii.) the possible exceptions set out in Policy E-P-12(1)(c)(ii.)*

For information Amendment No. 4 includes the following proposed wording '*Not Normally Permissible - Like the other two designations, these areas were identified on foot of a comprehensive analysis of the environmental sensitivities and the wind energy potential of the County. On foot of this determination, and in-line with national guidelines, it follows that most windfarm developments will not normally be permissible. This should apply in particular to such proposals on previously undeveloped sites, inclusive of sites with a lapsed un-implemented permission (and where substantive works have not been undertaken). Notwithstanding, and having regard to previous planning assessments and decisions and the subsequent investment incurred, it is the position of Donegal County Council that a more balanced approach is required when dealing with windfarm proposals in these areas where, crucially, there is an already existing strong planning history. This refers to the following categories: Existing Windfarms; Developments Under Construction; Developments Where Permissions Have Lapsed But Where Substantial Works Have Been Completed; and Sites With a Live Permission but not yet started. For such sites, it is considered reasonable to allow for the consideration of proposals for the augmentation, upgrade and improvement of such developments in accordance with the details set out in Policy E-P-12 below*'

For information the new Policy E-P-12 includes the following proposed wording '*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:*

(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 preconstruction 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.*

In addition, a new Policy E-P-23 is also proposed as follows:

It is a policy of the Council that wind farm developments:

(1) (i.) Must not be located within:

- (a.) the zone of visual influence of Glenveagh National Park;*
- (ii.) Must not be located within the following areas, subject to the possible exceptions set out in Policy E-P-12(1)(c)(ii):*
 - (b) the Gweebarra River Basin;*
 - (c) areas contained within 'Especially High Scenic Amenity' on Map 7.1.2 'Scenic Amenity';*
 - (d) Freshwater Pearl Mussel Catchments; and*
 - (e) St. John's Point.*

Part 2 of this policy also includes a stipulation regarding minimum setback distance for visual amenity purposes of ten times the tip height of proposed turbines from the nearest part of the curtilage of residential properties and other centres of human habitation, exceptions may be considered for lower distances where agreement with residents is possible.

6.6. Natural Heritage Designations

- 6.6.1. The approximate distance and direction to a selection of the nearest European designated natural heritage sites to the appeal site, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), are listed in Table 6.1.

Table 6.1. Natural Heritage Designations within 15km of the appeal site

Site Name and Code	Distance	Direction
River Finn SAC [SAC 002301]	Site overlaps SAC boundary	Site overlaps SAC boundary
West of Ardara/Maas Road SAC [000197]	Site overlaps SAC boundary	Site overlaps SAC boundary
Lough Nillan Bog (Carrickatlieve) SAC [000165]	1.7km	South
Lough Nillan Bog SPA [004110]	1.7km	South
Derryveagh and Glendowan Mountains SPA [004039]	2.4km	North
Meenaguse Scragh SAC [001880]	4.1km	South
Cloghernagore Bog and Glenveagh National Park SAC [002047]	4.9km	North
Meentygrannagh Bog SAC [000173]	6.2km	Northeast
Coolvoy Bog SAC [001107]	6.5km	North
Meenaguse/Ardb ane Bog SAC [000172]	7.4km	South
Gannivegil Bog SAC [000142]	8.8km	Northwest
Lough Eske and Ardnamona Wood SAC [000163]	11.7km	South
Slieve Tooey/Tormore Island/Loughros Beg Bay SAC [000190]	13.3km	Southwest
Sheskinmore Lough SPA [004090]	13.4km	West
Inishkeel SPA [004116]	14.0km	West

6.7. EIA Screening

- 6.7.1. An EIAR was submitted with the applicant and is examined within Section 8.0 below. The proposed development is located c. 38km northwest of Northern Ireland, Article 7(4) of amended EIA Directive (2014/52/EU), requires transboundary consultation to be entered into whereby significant direct or indirect effects are considered likely. I am satisfied, based on the information submitted, the separation distance of the proposed development and having regard to existing established development in the area, that such effects do not arise and as such transboundary consultation is not required in this instance.

7.0 The Appeal

7.1. Grounds of Appeal

- 7.1.1. A first-party appeal of the Planning Authority's decision to refuse planning permission prepared by Harley Planning Consultants Ltd was submitted on behalf of the applicant.
- 7.1.2. The first three sections of the appeal set out the background to the proposed development, the site location and development description. Section 4 sets out details of the planning authority's decision and Section 5 sets out the grounds of appeal. A short conclusion is presented in Section 6. The principal grounds of appeal which are presented as responses to the reasons for refusal can be summarised as follows:

Refusal Reason No.1

- The appellant notes the advice appended to the refusal decision in relation to the installation of HV cables in the local road network. While they acknowledged that this issue it is not a matter for the appeal process the appellant wishes to advise ABP that in discussions with the DCC Senior Road Engineer it was confirmed that the Roads Authority would allow cables in the road if the operator has a Section 48 licence consent from the CRU.
- In relation to the planning authority's reason for refusal no.1 it is stated that there are currently a large range of wind energy policies, guidelines and

objectives at local, regional and national level that provide a strong basis which allow for the assessment of wind energy developments. The appellant refers to previous examples of appeals where DCC has refused permission (References - ABP 304685-19, ABP 305861-19, ABP 308419-20) and the Board has subsequently granted these developments on appeal. Reference is made to various statements contained within the respective Inspector's Reports where it is noted that there was a presumption in favour of renewable energy projects and therefore there is sufficient guidance policy available to determine the suitability of the proposed development. It is suggested that this established precedent in decisions by the Board is equally applicable to the subject application notwithstanding the order made under Ref. 2018/533 JR in the High Court in November 2018.

- It is therefore considered that the planning authority is unreasonable in persisting with the lacuna in wind energy planning policy as a reason for refusal.

Refusal Reason No.2

- Wind turbines do not constitute a considerable and unacceptable adverse visual impact within the particular location which is designated as EHSA.
- The previous Donegal County Development Plan (CDP) 2006-2012 designated the area as High Scenic Amenity and the lands designated were changed to EHSA under the subsequent CDP 2012-2018. The planning authority at the time would have been aware that permission existed on the subject site for 13 wind turbines. Therefore, it is reasonable to conclude that wind turbines and their development on the subject lands were fully acceptable to the planning authority in terms of visual impact despite being located on lands designated EHSA.
- Despite the EHSA designation on site the appellant also highlights reference to the lands having also been designated as "Acceptable for Augmentation" for wind energy on Map 8.2.1 of the operative Plan. Despite Map 8.2.1 being subsequently deleted from the plan following an uncontested High Court judicial review (as referenced above). The appellant then refers to Policy E-P-12 which states that the planning authority would "consider the augmentation,

upgrades and improvements of existing wind farm developments within areas identified as ‘acceptable for augmentation of/improvements to existing wind farms’ on the Wind Energy Map 8.2.1 on a case by case basis.....”

- The appellant states that following consultation with the planning authority it was confirmed that within ‘acceptable for augmentation’ areas, reapplications for wind farms will be supported, whether the previously permitted wind farm permission has expired or not. The appellants therefore considers that the proposed wind farm is supportive in policy E-P-12.
- It is further considered that in terms of visual impact, part of the underground grid connection is located on roads adjacent to the West of Ardara/Maas Road SAC and crosses under the Stacashel River within the SAC, does not alter the positive support for a reapplication of a wind farm under Policy E-P-12, where the wind turbines are not within a Natura 2000 site.
- The reason for refusal on the basis of the adverse visual impact on the lands designated as EHSA contradicts the planning authority's own written advice to the appellant which clearly supported the reapplication of wind farm within the site designated EHSA. The deletion of Map 8.2.1, following the High Court judicial review does not alter the trust of the planning authority's stated position on the support for wind farms within such designations.
- In terms of visual impact the proposed wind farm fully conforms to all of the aspects of the Wind Energy Guidelines 2006 (which they state are also contained within the draft Wind Energy Guidelines 2019) , in particular the appellant has placed emphasis on Section 6.3 which refers to the positive effects of forestry within the setting of a turbine and the counterbalance that such landscape features can provide, which the appellant highlights is present on site, as well as the turbines positioning on a rising slope.
- The ESHA designation, as outlined in Policy NH-P-6 does not rule out wind energy development which can reasonably be deemed to be of strategic importance and which is provide for by policy elsewhere in the plan. Furthermore the PA’s decision contradicts its own assessment of locations suitable for wind turbines, the wind farm site is “acceptable for Augmentation” for wind energy on Map 8.2.1 in the same Plan. While Map 8.2.1 has

subsequently been deleted from the Plan (under JR (2018/533JR) this wind energy designation is evidence that the PA supported development of wind turbines at the location despite its designation as an area of EHSA.

Refusal Reason No.3

- It is considered that the NPWS have entirely misunderstood the EIAR and the proposed mitigation in particular. The applicant also states that comparing the current site to that at Meenbog, where a recent peat landslide occurred is inappropriate.
- Peat Slippage - an extensive and comprehensive assessment of the risk rating of peat landslide occurring was carried out on the subject site (see para 6.4.4 of EIAR). The assessment found that areas of deep peat do not occur extensively at the subject site and only occur in small, isolated areas contained and trapped by bedrock ridges. One area where uncontained deep peat occurred was avoided by relocating turbine T06.
- The appellant states that a detailed comparative analysis comparing the subject site and that of Meenbog, where a previous landslide occurred was carried out and that the conclusion of this comparison is that the ground conditions and construction methods that contributed to the landslides at Meenbog do not occur at and will not be used at the subject project site. No deep peat is traversed, and no floating roads are proposed. Moreover, nowhere in the submitted planning documentation is it stated that there is a reliance on dilution as a mitigation to water pollution as alleged by the DAU.
- Siltation of Water – In response to the DAU's concerns the appellant acknowledges the sensitive nature of the fauna in the downstream receiving water courses (freshwater pearl mussel (FWPM) and salmon) and state that mitigation and monitoring proposals for the project were developed having full regard to the receiving surface water environments and are set out in detail in sections 7.5 and 7.7 of the Hydrology Section (Chapter 7) of the EIAR.
- The appellant states that the nearest FWPM population is at least 5km downstream from the wind farm site, as is the nearest suitable habitat. It is considered that the DAU gave insufficient attention to the mitigation measures proposed which included settlement ponds, silt filters and check dams along

access roads and new sections of road (see para 7.5.3 of Hydrology Chapter 7 of EIAR).

- In respect to the DAU's concerns in relation to the 'distance of drill launch and receiver pits from water courses and associated mitigation' the appellant directs the Board's attention to the details of same contained in Section 7.1.4 of the NIS, which states that the launch and receiver pits for HDD works will be located at least 25m from the watercourse to be crossed, in addition to a range of further mitigation measures to be applied.
- In respect of point 2 of the DAU's response, Section 7.1.4 of the NIS contains details of the Frac-out plan, and these are also included as Attachment 6 of the CEMP, which is itself included as Appendix III to the NIS.
- The appellant states that the water quality discharging from the development will be unchanged for the salmon and the FWPM and that no adverse impact, beyond scientific doubt, on these qualifying interests of the SACs will arise. It should also be noted that no floating roads are required for the development, no piling will be needed for the turbine foundations and there will be no blasting associated with the proposal.
- The appellant also highlights that the DAU had no objection to the previous application for 13 turbines which was permitted on site and included a new bridge crossing over the Stracashel River, which would have had more potential to adversely impact on downstream qualifying interests than the currently proposed HDD crossing of the same river.

Refusal Reason No.4

- The appellant highlights that further information was requested by the DAU in relation to 4 points. Three of these points have been addressed within a confidential report attached to Appendix D of the appeal response. The information submitted includes maps of flight lines and descriptions of the flight paths. The data demonstrates that the majority of Merlin activity reentered at the site took place outside of the 500m turbine buffer.
- The rationale in respect of the likelihood that the Merlin pair recorded within the site comprise a portion of the populations associated with the relevant

SPAs is set out in Section 5.3.3 of the NIS. This concluded that the pair recorded within the site comprise a portion of the Lough Nillian Bog SPA population and does not form a part of the Derryveagh and Glendowan Mountains SPA population.

- The appellant has submitted Merlin flight records and map locations of nesting sites for the years 2019 and 2020 as part of the confidential information with the appeal. The NIS confirms the nest locations occupied at Graffy and the nearest sections of the Lough Nillian Bog SPA and Derryveagh and Glendowan Mountains SPA with suitable habitat for Merlin and in both surveys the nest sites were found to be more than 5 kilometers from both these Natura 2000 sites with suitable habitat. Therefore, both SPA's are beyond the core foraging range for the Graffy nest sites used in 2019 and 2020 and are therefore not associated in any meaningful way with the adjoining SPA's.
- In response to point 2 of the DAU submission – The appellant states that the Merlin pair have nested close to a working farm and adjacent to a public road and accordingly are resilient to disturbance. It is also acknowledged that construction related disturbance can be avoided by timing of the works (outside of bird nesting season March 1st to August 31st) and Merlin are not particularly sensitive to wind turbine operation or disturbance.
- The appellant notes that the DAU response questions the outputs from the collision risk model, which supported the NIS. The applicant submits that the CRM has been undertaken utilising a range of current and relevant guidance and analysis of a relatively high number of observations of Merlin, as recorded throughout the survey giving relatively high confidence in the model outputs. A predicted collision rate of 0.73 collisions is the worst-case scenario and as such the development will not give rise to the collision of the single Merlin throughout the lifetime of the scheme.
- In response to the DAU's concerns regarding displacement of breeding pairs the appellant has shown that the Merlin pair territory does not lie within the identified SPAs and that displacement is unlikely because of the development.

- The appellant states that they have set out substantial mitigation measures to address any potential adverse impacts on all species in the vicinity of the wind farm with particular emphasis on Merlin.
- It is the view of the appellant that the DAU response has not fully taken into account all the information provided within submitted documentation and that sufficient evidence has been provided to ensure that the potential impacts (raised by the DAU) will not occur either as a result of the development design or through the implementation of appropriate mitigation measures.

Refusal Reason no.5

- A comprehensive avian impact assessment conducted by the appellant is presented in the EIAR (Section 10(ii) 5.3 Chapter 10). Section 10(ii) 3.3 of Chapter 10 sets out the methodology used in the determination of significance for potential impacts. The DAU response contains no reasoned discussion, supported by any substantial scientific evidence detailing the process through which the DAU's assessment of significance was reached. The DAU's response cannot be considered as constituting an assessment of likely significant effects for golden eagle or white-tailed eagle. The DAU is methodologically incorrect in its application of Percival (2003) in that pivotal components of the assessment process have not been conducted in an appropriate manner.
- In its review the DAU does not refer to the proposed mitigation measures, as detailed in the EIAR (Section 10(ii) 6.1 of Chapter 10).
- The DAU's review of the EIAR (Section 10(ii) Avi-fauna) does not appear to fully consider the supplementary information provided.
- In response to the DAU's specific observations, the appellant states that the baseline conditions and impact assessment presented in the EIAR (Section 10(ii) of Chapter 10) provides clearly reasoned arguments as to how conclusions were reached for each species based on the data and scientific evidence available.
- By combining comments for white-tailed and golden eagle the DAU response does not recognise pronounced behavioral differences between these two

species especially in relation to wind farm developments. Ideally two separate assessments, one for each species, should have been provided by the DAU.

- Operational Displacement effects for golden eagle – it is evident that the DAU’s assessment has resulted from using a measurement derived from the distance of a golden eagle territory to the application site inclusive of the grid connection/substation (these works will have no significant displacement effects). The appellant states that the measurement to the operational wind farm (turbine locations), as applied in the EIAR would be more appropriate. No nest site locations were found during the two year surveys conducted within the 6km buffer of the proposed turbine locations.
- In relation to territory/home range of golden eagle the DAU’s comments are misleading and inaccurate. Firstly, in the absence of marked birds or dedicated tracking of the pair(s) in question, it is not possible to determine the origin of adult birds recorded. A high proportion of birds recorded were sub-adults considered to be ‘floaters’ which would be more suggestive of this area being located outside the core home range for the breeding pair.
- In terms of site usage – the DAU’s assertion that ‘the site is an important foraging area for golden eagle’ does not apply any comparative metric and is not supported by reference to scientific studies. In terms of food availability within the 500m turbine buffer for large raptors like golden and white tailed eagles, carrion (sheep carcasses) is likely to provide the only source of food. As proposed in the mitigation measures (Section 10 (ii) 6.1.3 Chapter 10) regular checks and removal of fallen stock, as well as other carrion would be an effective measure in limiting attraction of scavenging birds into the area. Therefore, indirect operational effects on golden eagle is assessed as negligible and therefore not significant.
- In relation to white tailed eagle, it is considered that the DAU’s assessment of ‘probable breeding’ is pre-emptive and does not reflect the reality as recorded by baseline surveys. As detailed in EIAR (Appendix 3, Table 6 of Chapter 10ii) while some of the birds recorded were definitely adults based on plumage characteristics, a high proportion were identified as immature sub adults. In terms of the adult birds, based on identification wing tags, it appeared that

there may be several birds crossing through the area. It is the appellants position that the original assessment for indirect operational effects on white-tailed eagle remains valid and is assessed as negligible and therefore not significant.

- Predicted collision risk for both white tailed eagle and golden eagle are presented in the EIAR (Chapter 10 Sections 10(ii) 5.3.3.3 and 5.3.3.5 respectively). The predicted collision risk values quoted in the DAU's response are incorrect and appear to be based on figures from an EIAR for an earlier application on site which was withdrawn (DCC Ref: 21/51202). The correct results from the CRM for golden eagle outlined in the current EIAR are 0.06 collisions per annum for the Nordex 133 spec, equivalent of 1 collision every 17.3years, or 1.73 collisions every 30 years. The correct results for white-tailed eagle for the same turbine spec (which is worst case scenario) is 0.26 collisions per annum, equivalent of 1 collision every 3.9 years or 2.79 collisions every 30 years.
- To quantify the population effect for golden eagle the DAU suggests that one pair will be affected by the proposed development which 'constitutes approximately 20% of a national breeding population' i.e. One pair of five territories reported for Co. Donegal. Based on Percival (2003) the assumed population effect of 20% would be classified as having an effect of medium magnitude and result in an effect of high significance which is below the threshold for a very high impact suggested in the DAU's response. The DAU wrongly justifies their assessment of population effect by stating that the development site "forms an integral part of the home range/core territory of the pair nesting in close proximity (<6km)". The appellant has highlighted that the DAU's observation is not supported by the data collected during the baseline study, which recorded a number of different Golden Eagles including a high proportion of subadults, mainly commuting through the area. Therefore, there was no indication that the application site is within core (6km) foraging range of any established breeding site in County Donegal. Furthermore, there were no eagle breeding sites identified within 6km of the proposed development site once it becomes operational. It is the appellant's position that the original assessment for direct operational effects on golden eagle

remains valid and is assessed as low population effects generating a direct effect of low significance.

- In the case of the white-tailed eagle, the appellant notes the DAU's highly precautionary scenario - avoidance rate of 0.95. The submitted EIAR however (Section 10(ii) 5.3.3.3 para 312& 313) Provides justification for the use of alternative higher avoidance rates (98% based on May et al.,2011), Which generates a predicted value for collision related mortality with 2.8 collisions predicted over 30 years, equivalent to 1 bird every circa. 11 years (For worst case scenario Nordex 133 spec. turbine). Again, the DAU response provides an estimation of population effect to justify the rating of very high significance for the proposed development with 1.5 breeding pairs predicted to be lost over the operational lifetime of the project. If applying the same logic as used by the DAU for golden eagle, 1.5 pairs represent approximately 12.5% of the Irish white tailed eagle population. Therefore, the assessment of moderate population effect would be appropriate, and it is difficult to see how a very high magnitude of effect was justified in the DAU assessment. In addition, this species was not breeding in the environs of the proposed development at the time of assessment and therefore reference to effects on breeding birds is preemptive and should not be regarded as material.
- As detailed in the EIAR (Section 10(ii) 5.3.3.3 Para 316 of Chapter 10) presents a conservative predicted collision risk (employing lower 95% avoidance rate) (0.26 collisions per annum) for a population of 36 birds (which circa 30% subadult birds) the additional mortality due to turbine mediated fatalities would be <5. Based on Percival (2003) this is considers a low magnitude of this effect (a small but discernible reduction in the size of or productivity of the population). Therefore, it is the appellant's position that the original assessment for direct operational effects on white tailed eagle remains valid and is assessed as low population effects generating direct effect of low significance.
- The DAU response does not assess the proposed mitigation to limit potential impacts on eagle species from the proposed development. Proposed mitigation measures designed to limit collision risk for eagles are detailed in

the EIAR (Section 10(ii) 6.1.3 of Chapter 10). These include embedded mitigation i.e. reduction in the number of turbines proposed from 13 to 8 and avoiding turbine placement in areas identified as attracting the most eagle flight activity (upper slopes of Aghla Mountain), and also include mitigation measures to reduce the attractiveness of the site for foraging eagles i.e. strict farm hygiene protocols - removal of carrion.

7.2. Planning Authority Response

7.2.1. The planning authority's response to the grounds of appeal states that they wish to rely on their previous assessments of the proposed development with additional commentary that can be summarised as follows:

- It is strongly reiterated that the current application is a new planning application and has been assessed under statutory legislation as such. The previous application which had the benefit of a 10-year permission was not availed of and therefore reliance on this previous planning determination is not considered material to this proposal.
- A variation of the CDP 2018-2024 (as varied) with regard to wind energy policies has been commenced and it remains the position of the PA that there are significant deficiencies in the policy framework pending formal adoption of the variation.
- Further, despite publication for consultation purposes of national Wind Energy Guidelines in 2019, the response to consultation has not been published and there is still no revised national policy, therefore it is considered the current proposal is premature and contrary to the proper planning as policy is not in place.
- Refusal reason no.2 relates to the EHSA designation. The wind energy map as initially set out in the CDP was removed as a consequence of High Court action. The PA does not therefore have a spatial basis at present to determine suitability of wind energy proposals. Assessment is therefore based on careful consideration of the scenic amenities and visual impact of the proposed development through assessment of natural heritage policies as set out in the Development Plan, Chapter 7.

- There is no longer an extant permission on site and further the lands are currently zoned EHSA. The previous permission was assessed where the land use designation was of a lesser scenic category. Policy NH-P-6 of Development Plan 2018-2024 (as varied) sets out the policy and it is further set out in the preceding paragraphs to the policy that “areas of especially high scenic amenity are sublime natural landscapes of the highest quality that are synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development”.
- Photographs of the proposed development site are included in the appeal statement to illustrate the “bleakness” of the landscape. The PA consider that the photographs serve to substantiate the openness and unspoiled nature of the upland environment and the lack of capacity to accommodate 8 turbines that are materially larger than was previously permitted.
- Planning authority considers that the proposal has the potential to adversely impact on the scenic amenity of the designated landscape and would therefore be contrary to Policy NH-P-6.
- With regard to refusal reasons 3, 4 and 5, the Department of Housing, Local Government and Heritage is the statutory authority for referral from the planning authority on all matters ecological and environmental and the PA is satisfied that the detailed and specific responses received form the basis for refusal of the proposed development.
- Having regard to the cumulative consideration of all reasons for refusal, a decision to issue refusal without recourse to further information was considered the appropriate and proper procedural action. Further information is only sought when the principle of the proposed development is acceptable across all areas of policy assessment, which in this case it was not.

7.3. Observations

- 7.3.1. 11 no. observations were submitted in response to the grounds of appeal, these included submissions from local residents, one on behalf of the Graffy Environmental Group (compiled by EMS), the Irish Red Grouse Association, the Gweebarra Conservation Group, one from a local councillor representing concerned local

residents. The issues raised by the observers support the planning authority's reasons for refusal and can be collectively summarised as follows:

Previous Applications on site

- The applicant describes the current application as a “re application” for a previously permitted wind farm. This is not the case nor is the current application “an amendment to a previously permitted wind farm”. The previous planning permission has lapsed through the passage of time (February 2021), there is no current permission, and the Board must consider only the application before it.
- Given that the previous permission has expired, the Board is urged to consider the current application as an entirely new application, given the much greater power of the proposed turbines and the potential adverse effects on wildlife, conservation, amenity and recreation.

Water Quality and Biodiversity

- Due to the implementation of access tracks to Turbines 1-7 peat, silt and construction debris from the site has a high potential to enter tributaries 1-9 and into the Stracashel & Stranagappoge Rivers and eventually into the Finn and Owenea catchment area. Section 10.5.9 of the Fisheries and Aquatic Report section confirms.
- At least two turbines T5 and T6 are located beside a stream. Two more T1 and T3 are located very close to a stream.
- The proposed development would have significant adverse impact on the ecology of the site and the wider area. Concerns regarding the impacts on freshwater pearl mussel (FWPM) – doubt regarding adequacy of mitigation measures.
- As Table 10.15 shows the proposed development encompasses watercourses mostly rated with medium, high, very high or extremely high ecological sensitivity which have direct hydrological connectivity to the West of Ardara/Maas road SAC (000197) and the River Finn SAC (002301). The proposed development is located proximate to the River Finn and the associated Glenmore Rivers (a leisure tourist based company) and will

therefore have a direct effect on the river and its business. Glenmore River and the River Finn is internationally recognised for the quality of its fishing and the iconic Atlantic salmon.

- The sensitivity of the River Finn, as a nursery and spawning area for anadromous salmon and trout as well as habitat for the European eel cannot be overstated. Main concerns lie in the impacts on aquatic ecology that could be caused to the fishery.
- Stranagoppoge is an important spawning and nursery area, running into the Finn at Ballinamore which along with the habitat downstream of the junction is some of the best spawning areas on the whole Foyle system.

Turbine Model

- Two turbine types are presented Nordex (149.6m max height) and Enercon 126 (149.44 max height). The recent HC judgement (IEHC 390) emphasised the importance of proposed actual dimensions for the final proposal.
- Any software simulation for noise, shadow flicker etc. is now invalid as incorrect height parameters for the modelling have been used in the process.
- The changing of turbine technology, inaccuracy of dimensions, lack of attention to detail, as well as many other aspects that have changed throughout the series of previous applications on the subject site and withdrawals is a very worrying trend.

Impact on surrounding properties, land and property value

- It is the observers view that the note inserted in red under Section 6.5 of Part B Appendix 3 of the current Development Plan (2018-2024) confirms that the wind turbine separation distances are still included in the CDP and have not been removed and must be considered as part of the council's policy on wind energy.
- The development plan stipulates a minimum set back distance of 10 times tip height of a turbine from an inhabited property. Taking the height of the Nordex turbine at 149.6 meters $\times 10 = 1496\text{m}$ which is the recommended distance from each turbine to a inhabited property. A total of 67 out of 208 of points recorded breach the above stipulation.

- Land and property value in the surrounding area will be impacted as a result.

Impact on protected bird species

- The collision risk modeling (CRM) was not undertaken for black headed gull, peregrine or woodcock.
- Survey data is unavailable for certain conditions including nighttime and storm conditions.
- Flight height information was subject to observer bias.
- The CRM does not include any risk of collision with turbine towers.
- The CRM report shows that prior to applying avoidance modelling the probability of a collision is very high i.e. there is almost a 10% chance of any bird colliding with a turbine. By implementing 2D flight path modelling only, the percentage of avoidance becomes very high and the higher the avoidance percentage the lower the collision risk. 3D modeling should have been applied to get a more accurate result.
- No regard for the fact that the subject site and study area is directly adjacent to a protected Red Grouse Sanctuary. The proposal would contravene policy NH-P-20 of the development plan which directly relates to the protection of red grouse.
- The applicant also failed to mention the red grouse's symbiotic relationship with the Golden eagle and this importance.

Guidance

- The DEHLG Wind Energy Development Guidelines 2006 are out of date and inadequate. They are also not statutory guidelines.
- The Board needs to decide should it remain bound by a 2006 non-statutory document or whether they should be free to consider the specific local situation and the legitimate concerns of local residents and statutory consultees who have expressed considerable concern about the proposal, its location and effects.

- The 2006 guidelines have not been subject to SEA or AA, both of which are legally necessary and therefore the guidelines must be regarded as legally unsound and should not be relied upon.

Noise impacts and Shadow flicker

- Significant shortcomings in the submitted noise report.
- Cumulative Assessment – The inclusion of Cullaigh Wind Farm – this windfarm does not appear to exist.
- House 1 and 39 which are inhabited residences are not included in the predicted noise levels assessment in tables 4, 5 and 6.
- The predicted noise levels for both turbine types are included in table 5 and 6 however the noise impact is only assessed based on the turbine that is closest in distance to the house in question. Where more than one turbine is within close proximity to a house these should also be assessed, which is not the case in the current assessment. A noise impact assessment based on the cumulative impact of all wind turbines in the area should be carried out.
- The assessment demonstrates that the noise impact assessment greatly exceeds the recommended level of 35db in numerous cases and therefore should be rejected on this basis or there is an error in the reports that needs to be addressed.
- The nearest dwelling to the closest turbine at 623m is too close and residents of this house and other houses will be affected by noise and shadow flicker.

Cumulative Impacts

- No study on the cumulative impacts of turbine infrasound or/and low frequencies of sound in the valley which is less than 1km wide. Potential to create geothermal winds and in the end generate more CO² than that which it is proposed to be offset.

Grid Connection

- A lengthy underground grid connection cable approximately 7.5km long would be needed to connect the proposed wind farm to the nearest Eirgrid switching station, most of which is proposed to travel along the local road. DCC have

stated that they do not intend to facilitate proposals for the installation of high voltage cables along the local road network. As this consent has not been given, it follows that the Board should refuse to grant planning permission.

Peat bogs, slippage and landslides

- Concerns regarding potential for peat slide similar to Meenbog. Significant risk of peat slippage given the areas of deep peat which are located within the site and would require excavation. It is clear from Chapter 6 of the EIAR that while the risk of peat slippage may be reduced it will not be eliminated.
- A significant number of bog slides occurred during or as a result of the construction of wind farms or site roads or during forestry operations associated with wind farms e.g. Gowlaunrevagh, County Leitrim and Derrybrien, County Galway.
- The total quantity of peat, soil and rock to be moved from one location to another, using the internal site roads, has not been specified in sufficient detail.
- Significant risk posed by the excavation and disposition of large quantities of peat and threat to FWPM and fisheries in particular Brown Trout.
- There should be a moratorium on wind farms on peat bogs – these need to remain as carbon sinks.

Public Consultation

- Inadequacies in consultation and access to application material on DCC website.
- The applicant has not substantially or effectively engaged with the local community.

Project Splitting and EIA

- The applicant admits to project splitting with promises to apply to the Regulator (CRU) sometime in the future to dig up the road to lay HV cables.
- Will An Bord Pleanála carry out their own independent EIA of the development?

Archeology

- Concerns regarding archeological features at turbine 8 and lack of assessment.
- Deep peat frequently contains remains of significant archaeological interest - it can therefore not be stated that there are no archaeological resources in the site area.

Visual Impact

- Concerns regarding the industrialisation of rural Donegal. The existing pattern of development in the area (dispersed farms and houses) does not in itself make the area suitable for windfarm development.
- Due to the proposed central location and height, these wind turbines will be visible from Errigal and Slieve Snaght in the north of the county to the Bluestack mountains in the south and further west to the Ardara area.

Gaeltacht Area

- The impact of the proposed development on culture and language must also be considered. Chapter 9 of the EIAR refers briefly to objective CCG-O-8 of the CDP but no language impact statement has been submitted with the application.
- It is the observers understanding that even though the proposed wind farm development does not include any housing or residential element, a language impact statement should have been submitted by the applicant.

Safety and health concerns

- Concerns raised about safety of wind turbines and previous case of blade detaching at Corkermore windfarm (2012) and also fallen turbine at site in Loughderryduffy (2013) and the proximity to residential dwellings of both incidents.
- Those residents living within 1.5km of the proposed turbines and up to 3km of the site will suffer serious health complications, in particular with regard to sleep quality – refer to “Hanning, Wind Turbine Amplitude Modulation and Planning Control Study, INWG”

- The same health concerns that were raised at the Straboy oral hearing in 2012 apply again in this case and it is contended that the position then - that no clear guidance on health was available to the planning authorities remains true today. An extract from the inspector's report from this case has been included.
- Contravenes Aarhus Convention – Article 2 – human health and safety.

Impact on Tourism

- The proposal will impact on tourism in the area and the Wild Atlantic Way (WAW) and the area which is exceptionally important in terms of the Irish language, folklore and cultural heritage.
- The proposal is located less than two kilometers from the main access road to the Croaghs at Meenaleenaghan and will dominate the landscape to the north and northwest for visitors and locals alike. It will also be highly visible from the old walking route from the Croaghs to Teanga Mheáin.
- Contravenes County Development Plan regarding tourism.

Climate Impacts

- The production of the concrete will require the use of huge amounts of greenhouse gas emission fuel for the manufacturing of cement. The gravel/hardcore have to be taken out of some other hillside and transported unsustainable large distances over poor quality roads.

Landowner Consent

- The co-owner of folios 13628 and 13629 has withdrawn her consent.
- No letter of consent from Coilte could be found on file and it is understood that they own a portion of the subject site.
- Significant portions of the site are used for turf-cutting, rough grazing and shooting, with some local individuals having turbary and sporting rights.

Natura Impact Statement

- There is significant uncertainty about the quality of the applicant's NIS and uncertainty about the information contained in it.

7.4. Further Responses

7.4.1. A Further Response (dated 5th March 2022) was received from the applicant, in response to the third-party observations received from the Graffy Environmental Group (compiled by EMS Environmental and Planning Consultants). This can be summarised as follows:

- It should be noted that only one type of wind turbine will be utilised if planning permission is granted.
- Flexibility in the turbine locations in accordance with paragraph 7.3 of the Wind Energy Development Guidelines 2006 is included in the planning application. Where this flexibility is exercised details of final sighting is submitted to and agreed in writing with the planning authority prior to commencement of development.
- It is worth noting that the DAU consultee submission which formed the basis for refusal reasons 3,4 and 5 was accepted by the planning authority at face value and without subjecting it to any analysis.
- Informing its view, the DAU appear to have misunderstood a number of matters, even then they did not recommend refusal on the basis of adverse impact on the Merlin species but sought further information which was ignored by the planning authority. As such the DAU did not have a fundamental difficulty with the proposal on the Merlin species.
- Refusal Reason 1 - It is considered that in light of previous assessments by ABP, the planning authority is unreasonable in persisting with the lacuna in wind energy planning policy as a reason for refusal.
- Refusal Reason 2 - A wind farm has already been found to be acceptable in principle at this location from a visual impact perspective and its capacity to accept wind turbines has been established. The landscape has not changed since that time and the Especially High Scenic Amenity designation on the lands proposed does not preclude wind farm development.
- Refusal Reason 3 – It is considered that adequate information on the protection of salmon and FWPM in the West of Ardara/Mass Road SAC and the River Finn SAC, through detailed mitigation measures has been provided

as part of the application. In this respect the water quality discharging from the development will be unchanged for salmon and FWPM.

- It is considered that the DAU have misunderstood the EIAR and the proposed mitigation in particular. These mitigation measures are well understood, in common use and highly effective.
- Refusal Reason 4 - the grounds of appeal set out in detail, responses to the items raised by the DAU, which the appellant was not allowed to address through a further information response. It is clear from this information that the Merlin pair in the vicinity of the site are not associated in any meaningful way with the adjoining SPAs. The grounds of appeal also established that the RSPB has written guidance for Merlin recommending that individual turbines are located to at least 200m to 500m from nest locations.
- The RSPB position is supported by numerous studies which indicate that Merlin are highly likely to habituate to operational wind farms. The Merlin nest sites were located well outside the 500m buffer of the proposed turbines.
- Refusal Reason 5 – it is considered that the DAU assessment is deficient in its application of population effects resulting in inflated significance of effects. Anecdotal evidence confirms that risks encountered by eagles in Ireland are minimal. EIAR chapter 10(ii) provides a robust assessment.
- Previous planning permission - the appellant considers - whether the previous application has expired or not the current proposal remains an amendment. It is noted that under policy E-P-12(c) the CDP refers to reapplication in cases where permission has expired.
- Expert analysis of noise and shadow flicker contained in the submitted EIAR demonstrate that there is not a significant number of dwellings close to the proposed site.
- Regarding the intention to install grid connection cables under the local roads - the Senior Roads Engineer of DCC confirmed that the roads authority would allow cables in the road if the operator has a Section 48 license consent from the CRU, which the appellant intends to apply for.

- Inland Fisheries Ireland acknowledged the mitigation measures proposed by the appellant's experts and did not express significant concerns regarding the proposed protection measures.
- The appellant is satisfied that there is full written consent from all the land owners to have their lands included in the planning application. Kathleen McGuigan, originally consented to the development on her lands by letter dated 15th of February 2021, but by letter dated 3rd of November 2021 withdrew her consent. However, by letter dated 19th of November 2021 she revoked the second letter advising that it had been procured under duress and reaffirmed her consent and support for the development.
- There are no turbary rights associated with these subject lands.
- Public consultation – The Covid 19 pandemic prohibited the in person meetings which were the preferred means of public consultation engagement with the local community. As an alternative a public information document outlining information pertaining to the proposal was circulated to 71 house owners/occupants in the vicinity of the subject site. A prepaid response letter for the recipients to provide comments was also included. A dedicated website was also created to enable comments to be made and an email address for further correspondence was also provided. Details of the project were also advertised in three local newspapers.
- Wind Energy Development Guidelines, 2006 - these have a statutory basis under Section 28 of the Planning and Development Act 2000 (as amended) and ABP must have regard to them.
- Apart from confirming advances in wind energy technology the observers haven't shown any single major flaw in the 2006 Guidelines. In any case the appellant has applied the standards embodied in the new draft guidelines in their assessment, which they consider more stringent than those in the 2006 Guidelines.
- The judicial review of November 2018 (Planree Ltd V Donegal County council 2018/533JR) deleted the residential separation distance which had been

outlined previously in the plan and no appeal against this deletion has been made.

- Peat slippage - extensive and comprehensive assessments of the risk rating of peat landslide occurring at the site were carried out (see paragraph 6.4.4 of the EIAR). This assessment found that areas of deep peat do not occur extensively on site and only occur in small, isolated areas. The proposed development avoids these areas.
- The total quantity of peat soil and rock to be moved and how this will be reused and recovered is specified in Section 6.5.2 of the EIAR. Roads will be constructed to accommodate heavy loads.
- The detailed assessment carried out concluded that the risk of peat slide on site would be negligible. Furthermore, a detailed comparison with the recent peat slippage at Meenbog was carried out and highlighted that the conditions at Meenbog are completely different from those experienced at Graffy.
- Visual impact - essentially both the planning authority and ABP have already found the site to be suitable for wind energy development from a landscape perspective and significantly, the scenic landscape designation in the current development plan does not preclude wind farm development. Prior to the removal of its wind energy location suitability map (map 8.2.1) from the current CDP on foot of a High Court order, the planning authority have designated the area as suitable for “wind farm augmentation”.
- Wild Atlantic way - the proposed site cannot be seen from the Glengesh Pass Discovery Point. The only point along the WAW which offers a view of the wind farm site is eastwards from a brief stretch of the R261 just north of Ardara, from which there is a partial view of part of the wind farm at a distance of 17km.
- Language impact assessment - the development of a wind farm cannot remotely be associated with the Irish language or more importantly adversely impact on the development of the language. If permitted however the appellant would ensure that any information boards associated with the developed wind farm would be presented in Irish.

8.0 Environmental Impact Assessment (EIA)

8.1. Introduction

8.1.1. 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). Projects for the purposes of EIA are identified in Schedule 5 of the Planning and Development Regulations 2001 (as amended) and the proposed development which proposes 8 no. wind turbines, with 35.88MW or 4.48MW power turbine maximum output, comes within the scope of Part 3(i) of Schedule 5, which is a class of development requiring the submission of an EIAR:

- 'Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts'.

8.1.2. An Environmental Impact Assessment Report (EIAR) (prepared by Harley Planning Consultants on behalf of the applicant) has been submitted with the application. The EIAR consists of three volumes:-

- Volume 1, a non-technical summary (NTS) summarises the Environmental Impact Assessment Report (EIAR),.
- Volume 2, the main report assessing a range of environmental issues by expert professionals and
- Volume 3, 3A & 3B, containing appendices associated with the main report in Volume 2.

8.1.3. I have examined the information presented by the applicant, including the EIAR, and the submissions made during the course of the appeal. A summary of the results of the submissions made by the planning authority, prescribed bodies, appellant and observers, has been set out at Section 7 of this report. The main issues raised specific to EIA can be summarised as follows:

- The potential impacts on designated sites and bird species, in particular merlin, golden eagle, white-tailed eagle and red grouse;
- The potential impacts of the works on water quality and the resulting implications for the biodiversity of neighbouring receiving waters, in particular

qualifying interests of nearby designated sites which include freshwater pearl mussel (FWPM) and Atlantic salmon; and

- The visual impact of the proposed turbines when viewed from the immediate site area and the wider area, and the resulting implications of this for visual amenity, local residents and tourism.

8.1.4. These issues are addressed below under the relevant headings, and as appropriate in the reasoned conclusion and recommendation. The likely significant direct and indirect effects of the development are considered under the following specific headings, which collectively address the factors set out in Article 3 of the EIA Directive 2014/52/EU:

- Landscape & Visual Impact;
- Population and Human Beings;
- Noise;
- Soils, Geology and Hydrogeology;
- Hydrology;
- Air Quality and Climate;
- Cultural Heritage;
- Biodiversity (with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC);
- Roads and Traffic;
- Material Assets; and
- Electromagnetic Impacts
- Interaction between the Factors.

8.1.5. The EIAR describes the proposed development, including information on the site and the project size and design. A description of the main alternatives studied by the developer and alternative locations considered is provided along with the reasons for the preferred choice, these are outlined in greater detail under Section 8.2 below. The impact of the proposed development was assessed under all the relevant headings as set out under the bullet points in Section 8.1.4 above. Mitigation

measures are set out in each chapter. Where further detailed surveys or assessments were required under each topic these have been compiled and are contained in Volume 3 – Appendices 1-6 or Volume 3A – Appendices 7-10. The content and scope of the EIAR is considered acceptable and in compliance with Planning Regulations 2001, as amended. No likely significant adverse impacts were identified in the EIAR post mitigation.

- 8.1.6. I am satisfied that the EIAR has been prepared by competent experts to ensure its completeness and quality, and that the information contained in the EIAR and supplementary information provided by the developer, identifies and describes the direct, indirect and cumulative effects of the proposed development on the environment and complies with Article 94 of the Planning and Development Regulations 2001, as amended.

8.2. **Consideration of Reasonable Alternatives**

- 8.2.1. Alternatives to the proposed development are outlined under Chapter 1 of the EIAR and were considered in terms of:
- Alternative sites;
 - Alternative site layout and design; and
 - Alternative technologies.
- 8.2.2. The report states that the assessment of alternative sites for the turbines is not realistically available to the applicant. The eight proposed turbines will be located generally at the positions of the turbines granted under the recently expired planning permission (PL 05B.237656). The original landowners own the lands on which the turbines are proposed and if granted, they will replace the previously permitted wind turbines on these sites.
- 8.2.3. The design and layout of the turbines was informed by the environmental and technical constraints associated with the site, including available land bank, offset distances with a minimum of four times the blade diameter from third-party dwellings, minimum distances between wind turbines, depth of peat and positions of the permitted turbines. It should be noted that the assessments outlined in the EIAR relate to both turbine models under consideration for installation: i.e. E126 and N133

turbine models. These are assessed both independently in certain aspects, such as wireframe visuals and shadow flicker; and where appropriate in combination, with regard to maximum dimensions such as their maximum blade tip height.

- 8.2.4. The report states that the size of the turbines selected optimises the predicted wind regime of the site. Maximising the efficiency of the turbines at the site, increases the environmental and climate change benefits of the project by increasing the offset of greenhouse gases. I note that reference is contained within Section 1.8.2 of the EIAR to a turbine design of rotor diameter of 132m, which appears to be at odds with the two turbine types proposed which have rotor diameters of 127m and 133.2m respectively. In terms of alternative technology, the report states that if the wind turbines are not developed, then fossil fuel power stations will likely be used to provide the required quantities of electricity. This will contribute to greenhouse gas and pollutant production. As Eirgrid has identified the Tievebrack substation as the end point for a grid connection, the method of connection of the wind park energy to the substation is the only alternative to be considered. EirGrid has insisted that the grid connection be underground and located along private and public roads, where access to the grid connection would be available. In addition, feed-back from the local community confirmed that underground grid connection was the only acceptable option.
- 8.2.5. I am satisfied that the EIAR has adequately addressed alternatives and that given the location of the Tievebrack substation that the proposed method of connection to the substation is the only option to be considered in this regard. I also consider the connection via underground cabling the preferred option.

8.3. Landscape and Visual Impact

- 8.3.1. Chapter 3 of the EIAR presents what the applicant terms a 'comparison Landscape and Visual Impact Assessment (LVIA)' which evaluates the change in landscape and visual effects which may arise as a result of the proposed 'optimisation' of 8 turbines at the formerly permitted 13 turbine wind farm site at Graffy Wind Farm, Glenties, Co. Donegal (Donegal County Council, P.A. Ref. 09/30520, An Bord Pleanála Ref. PL.05B.237656). This previous planning permission lapsed in February 2021, however, the applicant states that it is considered that a comparative analysis with

the recently expired permission remains relevant, as the baseline has remained unaltered. A LVIA Photomontage Booklet has been included in Volume 3 Appendix 2 (C) to the EIAR.

- 8.3.2. The applicant states that the comparison LVIA has been undertaken in accordance with established methodology and guidance, including the 'Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (GLVIA3), prepared by the Landscape Institute and the Institute for Environmental Management and Assessment' (2013) and the Guidelines on 'The Information to be Contained in Environmental Impact Assessment Reports', Draft, Environmental Protection Agency' (August 2017).
- 8.3.3. At this juncture I would like to highlight to the Board that while the GLVIA3 discusses comparative assessments, this relates to the examination of options to identify those with least adverse (or indeed most beneficial) effects so that there is transparency about how the landscape and visual considerations have influenced the final design, when compared to earlier, alternative, design iterations. It does not, as the subject LVIA would suggest, outline methodology for conducting a 'comparative assessment' of a previously expired permission. Having considered the applicants approach, I would highlight to the Board at this stage that I have serious concerns with how the subject LVIA was conducted, the reasons for which I elaborate on in the subsequent sections and assessment of this chapter below.
- 8.3.4. It should also be stated from the outset that the subject proposal is located on lands designated under the operative County Development Plan 2018-2024 (as varied) (hereinafter referred to as the operative CDP) as 'Especially High Scenic Amenity' (EHSA) which is afforded the highest degree of landscape protection under current local policy (as outlined under Section 6.5 of this report). It should also be noted that Variation No.2 to the operative CDP (2018-2024) came into force on the date of adoption on 18th July 2022. The aforementioned permitted development for 13 no. turbines (ABP Ref. PL.05B.237656) which overlapped with the current site (but also was larger extending for an additional area to the north of Graffy and along the valley floor) was located at the time in lands classified as 'normal landscape' under the previous Donegal County Development Plan 2006-2012, where at the time it was the policy of the planning authority to adopt a more positive attitude towards development proposals. The current policy under the operative CDP differs to a

great degree from that which was in place for the development plan which existed two plans prior to this, for the period 2006-2012.

- 8.3.5. The site lies on the foothills of Aghla Mountain (589 OD), which forms the northern boundary. Croveenananta (476 OD) lies to the south, with Boultypatrick (429 OD) to the east and Derkbeg Hill (332 OD) to the west. The site slopes from north to south crossing the valleys formed by the Stracashel, Stranagoppoge and Owenea Rivers. It varies in elevation from 120m OD to 310 m OD. The land uses range from rough grazing with some conifer plantations to commercial peat cutting. Some of the site is in the catchment of the Owenea River. The settlement pattern is generally dispersed with isolated houses/farmsteads along the foothills. More concentrated development is found in the lower Stracashel valley to the east and west of Graffy Bridge.

Landscape Character Types and Landscape Character Area

- 8.3.6. The Department of the Environment, Heritage and Local Government's 'Wind Energy Development Guidelines' (DoEHLG, 2006) outlines six Landscape Character Types (LCT) which define most areas, the submitted LVIA defines the LCT most closely represented by the area in which the proposed development site is located as 'Transitional marginal land', I would agree with same and note the mixture of both mountain moorland and farmland, as well as rocky outcrops within the subject site, which define such a LCT.
- 8.3.7. The Proposed Development Site is located within Landscape Character Area (LCA) 38: Bluestack as defined by the 'Landscape Character Assessment of County Donegal' (2016) which is a landscape dominated by vast areas of upland mountains, bogs and lakes. The area is traversed by popular walking trails through the Bluestack Mountains and mountain lakes and rivers, particularly the Owenea River are popular fishing locations.
- 8.3.8. The proposed turbines due to their height, number and moving elements have potential to have a significant visual effect on the receiving environment. The operative CDP outlines that the landscape of County Donegal is distinctive, unique and synonymous with the identity of the county, and an important contributory draw to the economy.

Zone of Theoretical Visibility

- 8.3.9. A radius of 20km was used for the Zone of Theoretical Visibility (ZTV). A blade tip height of 150m has been used for the purpose of calculations of the ZTV. In addition, a core study area of approximately 5km from the outer-most turbines has been used in order to focus in detail on the closest landscape and visual receptors. The LVIA states that this radius is informed by the formerly permitted planning application (referenced above in Section 8.3.1), ZTV analysis, reference to the findings of field surveys and viewpoint analysis, as well as professional experience from previous assessments. I note that site surveys were carried out in February and September 2019.
- 8.3.10. The applicant states that the most relevant aspect of ZTV mapping for this assessment is the potential increase in the visual exposure of the proposed taller turbines and their altered location when compared to the formerly permitted lower turbines and whether new visual receptors are potentially affected. As stated previously while I note that there was a previous approval on the site for 13 no. smaller turbines, this permission expired in February 2021. In addition, the landscape policy and designation for the area in which the subject site is located has also changed, therefore for the purpose of this assessment the comparison of a previous development on site is in a way unavailing, as permission for this former development has expired and therefore any development proposed on site would have to be considered anew, as is the case with the current proposal.
- 8.3.11. In relation to the difference in size and height that occurs, depending on the availability of the exact turbine type (Enercon 126 or Nordex 133) at construction, the turbine dimensions used in the ZTV mapping depict a blade diameter of 132 metres and a hub height of 84 metres, resulting in an overall blade-tip height of 150 metres. The applicant states that this will ensure the effects of both turbine types can be considered and that the slight differences between both turbine types will not lead to significant changes in their visibility as depicted in the ZTV mapping. I am satisfied that the ZTV mapping presented depicts a fair representation of the visual scenario and therefore that my assessment of the visual impacts from these turbines can be conducted appropriately given that their locations do not change and that from a distance the difference in the scale of both turbine types proposed would be almost

imperceptible. Therefore, I am satisfied that two separate ZTV mapping representing both turbine types separately would not be necessary.

8.3.12. For the purpose of my assessment, I consider Maps 1 and 2 of Appendix 2 of Volume 3 of the EIAR the most appropriate to use in terms of ZTV mapping and the subject assessment. Map 4 is useful for cumulative assessment purposes which are examined in more detail under Section 8.3.30 below which includes for the Loughderryduff windfarm c. 17km to the west. Map 3 of the same appendix indicates the ZTV for areas with increased theoretical visibility as a result of the proposed design change to Graffy Wind farm i.e. the additional effects when compared with the original permitted (but now expired) windfarm on site. As stated previously I do not consider this analysis useful for the purposes of my assessment.

8.3.13. Map 7.1.1 of the operative CDP includes a map of views and prospects. Policies NH-0-8 and NH-P-13 of the plan state that in seeking to preserve views and prospects, particular attention will be paid to views between public roads and sea, lakes and rivers. The majority of scenic views and prospects located within the study area are facing away from the proposed development site or intervening landform will fully screen views of the proposed development. The closest protected scenic views and prospects to the north of the site are located along the R252 and include views southeast across Lough Finn. The majority of these views will remain unaffected by the proposal due to the intervening Aghla Mountain and its foothills further east. However, there is a possibility for tip height visibility of up to two turbines from sections of the R250 and R252 in the vicinity of Fintown as indicated in Appendix 2, Map 2 of Volume 3 of the EIAR. As can be seen also from this map, the proposed 8 no. turbines will be visible from most areas within the valley and along both the public roads serving same, including portions of the R253 when looking north. I can confirm same having visited the area and observed visibility of the site area from various points.

Recreational Impacts

8.3.14. Several observers to the appeal have highlighted concerns in relation to the possible impact on tourism as a result of the proposal, in particular on walking routes in the area and on views from the Wild Atlantic Way (WAW). Views from long distance

walking and cycling routes are considered to have both a high value and their users are considered to have high susceptibility to change (high sensitivity overall).

8.3.15. Theoretical visibility was indicated on the ZTV mapping along a section of the WAW, north of Ar dara from the R261. Viewpoint 6 (see Photomontage Booklet in Appendix 2 of Volume 3 of the EIAR) is located on this stretch of road. The applicant's assessment states that the proposed development will generate a slight intensification of wind farm infrastructure in the landscape, when compared to the formerly permitted development as illustrated from this Viewpoint 6, however given the distance involved (c.16km) significance of effects on the WAW were considered Not Significant-Slight Neutral. Photomontage view no.6 and the associated wireframe show the view of the proposed turbines, which on a clear day will be visible from this location on the WAW. It would appear from the photomontage that the proposal will be the only windfarm visible from this viewpoint. While the proposed turbines will undoubtedly be visible, given the distance between this viewpoint and the site, which is c.16km to the east I do not consider the impact will be significantly negative for users of the WAW.

8.3.16. Potential visual impacts from the Bluestack Way and Sli na Fianne are also examined as part of Section 3.6.4 of the EIAR, however this assessment refers to the intensification of visual impacts in a comparative manner with that of the previously permitted windfarm rather than from a baseline of the unspoilt current landscape. Nonetheless an examination of the impacts from both these routes can be carried out by examining ZTV Map 3 (refer to Appendix 2 of Volume 3) and the associated photomontages. With regard to Sli na Fianne an assessment of the Viewpoint 3 and associated photomontage VRP No.3 which is located along this walking route, on the R253 is carried out. The EIAR considers the significance of effects 'Slight Neutral', but again this assessment is in relation to the intensification of impacts when comparing the current proposal with that of the previously permitted, but now expired, permission for 13 no. turbines. In my opinion this is not a fair comparison. The introduction of 8 no. wind turbines of tip height 150m will undoubtedly have more than a 'Slight Neutral' impact on views for this route and this is clearly demonstrated in the submitted photomontages VRP nos. 2, 3 and 4.

Landscape Effects

8.3.17. Section 3.6.7 of the EIAR states that there will be no significant alteration in landscape character occurring as a result of the 'optimisation' of Graffy Wind Farm, which includes the introduction of wind turbines, substation and a meteorological mast at the site location. Direct and long-term change will occur locally where the proposed development will be physically located. The landscape character at the site location will be similar when compared to the landscape effects caused by the formerly permitted development. Again, I consider the applicant's assessment in this case unsatisfactory, given that the site area in question now consists of an area designated as 'Especially High Scenic Amenity' (EHSA) as opposed to an area of 'Normal Landscape' which was the case under the past Donegal County Development Plan 2006-2012 (as assessed under ABP. PL05B.237656). The landscape and renewables policy applicable to the site now differs significantly from that of the aforementioned past development plan, therefore, a comparative study of both cannot be made. While the landscape of the area has not changed, the policy in relation to same has and a greater degree of protection is now afforded to this area for which it is necessary to assess the proposal against. Section 10.3 of this report examines the proposals compliance with current policy in more detail and should be examined in conjunction with this section.

Visual Effects

- 8.3.18. Visual effects resulting from the proposed development will be experienced from private and publicly accessible locations. The majority of significant views will be experienced within the core 5km study area where open or partial views of the development are possible, particularly in views from close proximity and at elevation, up to approximately a 2km radius.
- 8.3.19. The applicant states under Section 3.6.8 of the EIAR that the highest change in visual effects will likely occur in short and middle-distance views, particularly from elevated areas, where there are no or few intervening hills / or vegetation. The magnitude of visual effects is considered to range from Low to Medium. The resulting significance is considered to range from Slight to Moderate Adverse when compared to the formerly permitted development. An increase in visual effects is mainly due to the alteration in turbine height. Again, here I note the applicant's approach to examining significance of effect is based on the assumption that the previously permitted development represents the baseline from which significance of effect is

measured. They go on to state that 'additional' visibility occurs in sections of the south-western and western study area, refer to Map 3 as included in Appendix 2, which indicates areas of increased theoretical visibility up to blade tip height, these 'additional' effects are considered Low to Negligible and their significance Slight Adverse to Not Significant Neutral. Larger areas of additional visibility are generally located to the north and east of the proposed development site, refer to Map 3 as included in Appendix 2. Areas with increased theoretical visibility are located at a distance between 3-20km from the proposed development site. The majority of additional visibility occurs between 4-15km to north of the site in areas located on higher ground and slopes facing south. In these areas, sections of the upper parts of turbines or blade sections will become a new element in available panoramic and often long-distance views. The magnitude of visual effects is considered to range from Negligible to Medium. The applicant states that the resulting significance ranges from Not Significant to Moderate Adverse depending on the extent of visible sections of the wind farm in available views.

- 8.3.20. An 'Increase' in theoretical visibility has been identified along the upper most areas of the Derryveagh Mountains (Dooish) west of Lough Beagh and summits east of Lough Beagh. Having examined the ZTV Map including the Glenveagh National Park insert, while I note that some visibility of the windfarm will be possible from higher points in the park and from the mountains to the north and west, given the distance of c.26km involved between the park and the subject site, I would not consider the proposal will have any significant impact on the national park.
- 8.3.21. Views from the N56 and the regional road network including the R250, R253, R254, R259, R261 & R262, located within the study area are mostly partially screened by intervening vegetation and topography. I note that sections of the R250, R253 and R254 will experience the majority of visibility of upper parts of the proposed development.
- 8.3.22. Photomontages 1-7 (see Photomontage Booklet Volume 3, Appendix 2) illustrate a range of existing views from representative viewpoints located within the study area of 20km, together with superimposed computer images depicting the proposed development (showing a blade diameter of 132 metres and a hub height of 84 metres, resulting in a blade-tip height of 150 metres). This will cover both proposed turbine types, and in comparison, the formerly permitted development.

- 8.3.23. In assessing the visual impacts from the presented viewpoints the applicant has once again measured the qualitative assessment off a baseline of the permitted 13 no. turbine windfarm which was previously permitted but has since expired. Three of the viewpoints are within 5km of the turbine site, which I consider to be the local environment. The appellant considers that from two of these locations, Viewpoints 2 and 3 which are taken from points on the R253 to the southeast of the proposal, the proposed development would result in a Slight to Moderate Adverse visual impact, with Viewpoint 4 which is taken from the southern boundary of the site resulting in a Moderate Neutral impact. Having examined the submitted photomontages and the proposed views I would consider the impacts to be more significant than this. Turbines 7 and 8 will be clearly visible from these viewpoints with their elevated position adding to the significance of visual impact, in addition the blades of turbines 4, 5 and 6 will also be visible.
- 8.3.24. Two Viewpoints, 5 and 1 (see photomontages VRP no.5 and no.1) are located within 10km of the turbine site and with views from VRP5 at the R250 northeast of Glenties (6.2km to the west) considered 'Moderate beneficial'. While this may be the case when compared to the formerly permitted windfarm, in the case of the current proposal I would not consider the visual impact in anyway 'beneficial' from this viewpoint, which offers views of two of the turbines and the blade of a third. The LVIA itself under the assessment of Viewpoint 5 highlights 'Bluestack LCA – High sensitivity' around this viewpoint as the view is orientated towards Aghla Mountain and the Bluestack Mountains. The latter is designated as an area of EHSA. The sensitivity of this view is therefore considered 'High'. Therefore, the applicant's interpretation of visual effect in this case is questionable.
- 8.3.25. The remaining two viewpoints are considered to experience results of 'Slight-Neutral'. Viewpoint 6, from Owenea Bridge on the WAW north of Ardara is c.16.4km west of the proposed site with visibility of 5-6 turbines on a clear day. I have previously addressed this viewpoint under Section 8.3.15 above. Viewpoint 7 is located c.13.1km northeast at Meenaboll Hill and given its elevated location allows for visibility of all of the proposed turbines according to Map 2 of Appendix 2 of Volume 3 of the EIAR. The LVIA states that the Cark Mountain Uplands LCA has 'High' sensitivity around this viewpoint as the view is an elevated view of the surrounding landscape. The sensitivity of this view is therefore considered 'High'.

Table 13 of Chapter 3 of the EIAR states that this open and panoramic view is across a gently undulating and remote landscape in the fore and middle ground and towards Aghla Mountain and the Blue Stack mountain range in the background. Therefore, again I would question the applicant's method of measuring visual effect, given the clear visibility of the entire proposed development from this otherwise unaffected view (see VRP No.7).

8.3.26. The significance of the visual impact arises from both the visual sensitivity of the receptors and the magnitude of the impact. The majority of receptors will be local residents and visitors driving through the study area. Residential receptors are considered to have the highest sensitivity to visual or landscape changes as they will experience changes in views on a daily basis. It is asserted by neighbouring third-party observers that the appeal site is not suitable for wind turbines and would best remain as an undeveloped area, and that the proposed development has significant potential to impact on the visual amenities of the area,

8.3.27. I would consider the sensitivity or significance of the effect of the proposed development from a visual perspective from locations within the site and immediate to the site to be 'significant', albeit this would be in some cases experienced from more isolated mountainous areas or forestry tracks, amenity routes/walkways. However, all viewpoints presented are located on public roads and therefore offer the opportunity of views of the proposal to all road users. While I do acknowledge that the visual impact would dissipate over distance, I am not satisfied that the 'Significance of Landscape Change' as presented in Table 14 of Chapter 3 of the EIAR would be limited to that of 'Slight to Moderate Adverse' at worst. Although not assessed as part of the LVIA, from the other chapters of the EIAR it is noted that 19 no. dwelling houses are located within 1.3km of the 8 no. wind turbine locations. The closest inhabited dwelling (H5) is located approximately 623m from the nearest proposed turbine location (T5). To address the potential visual disturbance of turbines of varying scales, the draft Guidelines 2019 require a setback distance of four times the tip height between a wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development, subject to a minimum setback of 500m. I acknowledge that this is achieved with the proposed turbine tip height at 150m and the curtilage of the nearest house to the site located 623m from the proposed turbines. It should be noted at this juncture that the valley in

which the development is proposed is relatively unspoiled and this is emphasised by its EHSA designation under the operative CDP. Given the elevated nature of the proposal however and the topographical nature of the surrounding area, in which most houses are located close to the bottom of the valley floor or mid-way up the slopes on either side, visibility of the windfarm will be pronounced and in my opinion significant.

Construction Works

8.3.28. Landscape and visual effects during the construction stage will be experienced at the location of the proposed wind turbines, met mast, substation location as well as their surroundings due to earth works and the installation of underground cables along existing local roads (mainly L2593) and access tracks to the existing EirGrid Tievebrack Substation. The majority of receptors will be local residents and visitors driving through the study area within approximately 500m from the proposed development site boundary. The magnitude of landscape and visual effects is considered to range from medium to high and their significance will range from moderate to very significant adverse, particularly from locations adjacent to the construction works. I do acknowledge however that these effects will be temporary and for a limited time period.

Cumulative Impact

8.3.29. The majority of turbine visibility is extending to the north, northwest and southwest with isolated patches in the east. Visibility to the south and southeast is obstructed by the Blue Stack Mountain range and to the northwest by Aghla Mountain. A number of existing windfarms are located within the 20km study area, although I note these have not been listed within Chapter 3 of the EIAR. However, a list of nearby windfarms has been included in Chapter 4 under Table 4.16. These include wind farm projects at Loughderryduff, Cullaigh, Anarget and Corkermore, with the closest development at Anarget c.7.3km south of the subject site, consisting of smaller turbines up to 55m hub height; and with the next nearest other project beyond 15km.

8.3.30. Based on the submitted ZTV mapping (Appendix 2 of Volume 3), the applicant states that the most relevant existing wind farm for assessing cumulative effects is Loughderryduff Wind Farm, given its size and volume of turbines. The location of this windfarm c.15km west of the subject proposal can be seen on ZTV Map 4. The

appellant states that the majority of cumulative effects between both developments occurs in areas away from the public road network and in areas not generally accessible to the public. Joint visibility from the public road network will be from small pockets. While the visibility of the proposed development will increase slightly in the above-mentioned area, areas of potential cumulative visibility do not increase equally. The magnitude of cumulative landscape effects is considered 'Very Low'. The significance of landscape effects will be 'Not Significant Neutral'. Having visited the area and examined the submitted mapping I would concur with the applicant's assessment on this as contained within the LVIA.

8.3.31. The LVIA states under Section 3.5 that it is envisioned that there will be no significant adverse impact on the neighbouring LCA's due to effects of distance and intervening building structures, vegetation and topography. However, as outlined already under Section 8.4.25 above the LVIA also states that the Cark Mountain Uplands LCA has 'High' sensitivity around viewpoint no.7, given its elevated view of the surrounding landscape, therefore I would question the applicant's conclusion with regard to impacts on neighbouring LCAs.

Mitigation Measures

8.3.32. The applicant acknowledges that wind turbines are by their nature highly visible elements which cannot be easily screened and states that they relied on various measures to provide a more concise layout, when compared to the formerly permitted layout, with lesser but higher turbines to avail of the latest technologies available. Section 3.7 of the EIAR states that the proposed development has been designed in order to mitigate any impacts in the following ways:

- It is proposed to use a goosewing grey or matt white on the proposed turbines. These colours are neutral, and the appearance of these colours means that whatever the weather conditions or nature of the surrounding landscape characteristics, the turbines will never aesthetically clash in colour;
- Appliance of a dark ochre colour matching the surrounding bog grassland for all substation building structures to help the integration of the buildings into the surrounding landscape in close and distant views; and
- Use of material for building facades/cladding, fencing and gates which is local or appropriate to the area in scale, colour and design.

Underground Grid Connection

8.3.33. A connection between the proposed Graffy wind farm and the national electricity grid will be necessary to export electricity from the proposed wind farm. The current planning application for the proposed development seeks permission for a proposed 38kV grid connection substation at Meenagrubby which would connect, via a 7.5km underground cable to the existing Tievebrack Eirgrid Station in Drumnalough, Glenties, Co. Donegal. The grid connection would primarily run under the public road from the proposed substation to Meenamalragh townland, before passing under a private road to the Eirgrid Tievebrack Station. This route is indicated in an Overall Site Layout drawing no. 19-014-001 Rev 1-1 dated May 2020 included in the EIAR. I am satisfied that the underground grid connection cabling will remove any visual or landscape impact associated with this grid connection aspect. Visual impacts as a result of construction related activities are considered temporary in nature and therefore not significant.

Conclusion on Landscape and Visual Impact

8.3.34. In my opinion there would be no doubt that the proposed development would have a significant landscape and visual impact, both locally and over greater distances from roads and walking routes throughout this designated sensitive landscape. As discussed above the comparative LVIA between the previously permitted windfarm on the site and the current proposal is not considered appropriate, as it presents a skewed and unreliable baseline from the outset. In my opinion the height and scale of the proposed turbines would ensure the development would be highly visible and the applicant's photomontages demonstrate how substantial the landscape and visual impacts would be. The result of the impact of this development would be to change the understanding of the landscape, with damage caused to the landscape and visual qualities of this area.

8.3.35. The incongruity with the natural landscape could not be avoided and it is reasonable to determine that the proposed development would not sit comfortably with the provisions of the Donegal County Development Plan 2018-2024 (as varied) as they relate to designated sensitive landscapes. In addition, I submit that the location for a proposed development of this height, scale and siting does not have the capacity to

significantly reduce or mitigate the significant adverse landscape and visual impact that would arise.

8.4. Population and Human Health

- 8.4.1. Chapter 4 of the EIAR, titled 'Population & Human Beings', addresses the potential likely impacts of the proposed development upon humans relating to aspects of population, community, employment and economic activity, including tourism, physical land use, property values, residential amenities and also residential visual amenity assessment. The effects on 'Human Health Receptors' of health-related aspects are also considered, including assessment of shadow flicker, air quality and noise/vibration resulting from the construction, operation and decommissioning of the proposed development. A separate Noise Assessment has been carried out under Chapter 5 of Volume 2 of the EIAR. For the purpose of this assessment, I assess issues relating to noise and vibration impacts on human health under this heading. I also propose to assess the issue of community benefits under this heading.

Population Background

- 8.4.2. Graffy DED in which the proposal is located, experienced a substantial population decrease of 24.9% between 2006 and 2016, the highest rate of population decline within the study area. The population density of the area was recorded during the 2016 Census at 9.1 persons per km², which is significantly lower than the average for Ireland at 69.6 persons per km².

Risk of Major Accidents and/or Disaster

- 8.4.3. Section 5.7 of the 2006 Guidelines state that there are no specific safety considerations in relation to the operation of wind turbines and that people and animals can safely walk up to the base of turbines. Section 4.5.5 of the EIAR reaffirms this in the case of the current proposal. Peat instability and failure are addressed in Section 7.5.2.4 of the EIAR and assessed further below under Section 8.6. While I note that several observers have raised concerns in relation to blade detachment and turbine collapse, I am satisfied that appropriate health and safety procedures to cover the construction and subsequent operation of the development will be drawn up in the pre-construction phase and will be enforced to ensure the health and safety of all personnel and members of the public. Section 4.5.5 of the

EIAR also states that no conclusive evidence has been presented on the potential link between turbine proximity and adverse impacts to human health, mental well-being, educational disadvantage or detrimental effect on nearby resident populations

Reflected Light and Driver Distraction

- 8.4.4. It is anticipated that driver distraction in relation to the proposed project will be negligible. Glint effects from the turbine blades are not likely since the turbines are a sufficient distance from major and minor roads and dwellings. Turbines will also be coloured matt grey to minimise this effect.

Conclusion:

- 8.4.5. I am satisfied, having regard to the individual aspects on the application assessed in each chapter and the mitigation measures proposed that the proposed development is not susceptible to major accidents and / or disasters

Residential Amenity Aspects

- 8.4.6. Section 4.5.7 of the EIAR contains an assessment which considers the potential impacts from the proposed Graffy Wind Energy and grid connection project that may be experienced by residents of properties within proximity to the development. The assessment was carried out in line with the Wind Energy Guidelines (2006). The main impacts on residential amenity that the Guidelines refer to are noise, shadow flicker and visual amenity.
- 8.4.7. Mapping of all houses within 10 times Rotor Diameter (RD) was conducted using the Nordex N133 Option 1 (worst case scenario) maximum model distance of 1,332m of the proposed wind turbine locations. 27 No. structures were identified within this radius of the turbines. Eight of these structures were identified as not occupied and are therefore excluded from consideration in this report. Therefore, there are a total of 19 no. dwellinghouses within 10 RD distance of 1,332m of the proposed wind turbine locations. The closest inhabited dwelling (H5) is located approximately 623m from the nearest proposed turbine location (T5). The location of these dwellings including two planning permission sites, are illustrated in Figure 4-1 of Annex 4-2 of Appendix 2 of Volume 3 of the EIAR. It is noted however that the written section of Annex 4-2 Residential Visual Amenity Assessment seems to mistakenly state that there are only 17 dwelling houses within the same distance (1,320m) – this is

contrary to the submitted map in Figure 4-1. The figures and distances referred to under Section 4.5.8 of the EIAR (Chapter 4 Main Report) appear to be correct however and therefore these will be referred to for the purposes of this assessment. Residential amenity is addressed under the following headings of noise, shadow flicker, property values, TV signals, traffic and turbine delivery. Sub-section 4.5.8 addresses residential visual amenity and overbearance.

Noise

8.4.8. Operational Noise: Noise has been assessed according to guidance in relation to wind turbine noise is the Wind Energy Development Guidelines 2006. It should be noted however that the new Draft Wind Energy Development Guidelines (2019) (DWEDG19) are an update to the previous 2006 guidance, and impose more stringent regulations, in line with ETSU-R97 – The Assessment and Rating of Noise from Wind Farms. This guidance has adopted the approach of establishing a Relative Rated Noise Limit (RRNL) from ETSU-R-97. The RRNL is determined through background monitoring before the wind energy development is in operation. The relative rated noise level resulting from the wind energy development and taking into account the cumulative impact of noise levels resulting from the other existing and approved wind energy developments shall not exceed:

- Background noise levels by more than 5 dB(A) within the range 35-43 dB LA90,10min, or
- 43 dB LA90,10min.

8.4.9. The assessment for the current proposal involved background noise monitoring and wind speed measurements taken at two locations in the vicinity of the site over a 15-day period in accordance with ETSU-R-97 requirements and the recommended Draft Wind Energy Guidelines 2019 methodology. Section 5.8 of the Noise Assessment report (Chapter 5 of the EIAR) states that the turbines used for this assessment are the Enercon E-126 EP3 4MW and Nordex N133 4.8MW. Sound power data used to predict noise impact of the wind turbines has been taken from the manufacturer datasheet – ‘ENERCON Wind Energy Converter E-126 EP3 / 4000 kW with TES (Trailing Edge Serrations)’ dated 29 April 2019 and Nordex Noise level, power curves, thrust curves – Nordex N133 dated 20 October 2020. The sound power levels for the E-126 used include uncertainty, as described in section 2 (Sound

power level) of the aforementioned document. The Nordex N133 turbines include a +2dB uncertainty factor. The noise levels shown in Figures 1 and 2 below takes account of the increase in noise levels and shows the octave-band data for the 9m/s wind speed (rated power). The above identified measurement margins of error have been incorporated into the noise levels shown in Figures 1 and 2 below. Therefore, the levels below were used within the noise modelling. Background noise monitoring was carried out at a location in the vicinity of the site over a period of 15 days, as per the requirements of ETSU-R-97.

- 8.4.10. Noise emissions from the proposed windfarm site at the residential properties in the closest proximity to the site have been assessed. The 30 closest residential properties are within 2.5km and described in Table 4 of the report, and shown in the layout in Appendix D. The locations of the residential properties correspond to those already outlined within Chapter 4 of the EIAR in relation to the RVAA, however I do note that there is some ambiguity in the labelling of derelict houses within the list, with H16 not flagged as derelict and considered as part of the assessment.
- 8.4.11. The noise predictions for all residential receptors for both proposed turbine types (Enercon E-126 and Nordex N133) are presented in sections 5.13 and 5.14 respectively. In the case of turbine type Enercon E-126 the results show that the predicted noise levels at each of the financially involved properties comply with the appropriate DWEDG19 limits. However, the results of the assessment for the Nordex N133 showed that the predicted noise levels at each of the third-party properties included are not compliant with the appropriate DWEDG19 limit for night-time hours at 6m/s and 7m/s wind speeds. Therefore, further assessment was required to ensure that the predicted levels do not exceed the limits at these receptors. The details of a curtailment strategy are provided under Section 5.16 of the Noise Assessment which has been tailored to ensure that noise levels from the proposed Graffy Wind Farm with eight Nordex N133 turbines is in compliance with the calculated noise limits. Under these conditions the noise impact assessment shows that operation of all turbines in the vicinity of the site will comply with the DWEDG19 limits as defined.
- 8.4.12. The report concluded that the highest potential noise levels from the proposed wind turbine comply with the appropriate noise limit for the daytime, evening and night-time periods, as defined by DWEDG19 as the appropriate noise limits. A cumulative

assessment was also undertaken considering all further proposed, approved and operational wind energy developments within 20 km of the proposed development, where it was confirmed that there was no impact on the predicted noise levels from the two turbine options in the wider vicinity of the site. Potential noise impacts on residents resulting from the proposed development are not considered significant and are in compliance with the limits set out in the 2006 Guidelines. Further details of the Noise Impact Assessment for the project are contained in Chapter 5 of the EIAR.

Construction Noise

- 8.4.13. Section 5.2 of Chapter 5 of the EIAR states that “while there will be construction carried out across the extended wind farm site, all works for turbine installation will be in excess of approximately 725m from the nearest third-party residential properties”. This statement is incorrect, having consulted the submitted maps ((Appendix D of chapter 5) and the figures presented in Table 4 of Chapter 5, the nearest occupied (i.e. non-derelict) third-part residential property is in fact ‘H5’ which is 623m from the nearest turbine location which is T5. However even having noted this mistake in calculations, by applying the formula to calculate ‘attenuation due to distance’ as outlined under Section 5.20, the noise level of any specific equipment operating on the site will have a resultant L_{Aeq} noise level at a distance of 623m is still predicted to be less than the 70dB L_{Aeq} limit specified by BS 5228-1:2009.
- 8.4.14. The proposed construction of the grid connection and haul route will involve temporary public road amendments, and these will on average take 1 day to complete approximately 100m section. The noise associated with the grid connection will only be during daylight working hours and days during the construction phase so there will be no additional contribution to the operational noise from the grid connection after construction. Where construction occurs at a distance of 30m or greater from a property, the construction noise level is expected to be below the target noise level of 70dB L_{Aeq} . Where construction occurs less than 30m from a property, the target noise level is expected to be exceeded, however, at a cable-laying rate of 100m per day, the equipment would only be expected to be within 30m of a property for a maximum of 6 daylight, working hours, if the construction occurs directly past the property. This will reduce the impact significantly, therefore potential noise impacts to residents resulting from the installation of the proposed grid

connection and haul route are not considered to be significant and are in compliance with the recommendations outlined in BS 5228:2009+A1:2014.

Decommissioning Noise

- 8.4.15. It is unlikely that this activity would lead to disturbance since it is expected that decommissioning of the turbines will be generally be similar to the construction phase, carried out at similar locations, with significant distances between the source and the receptors. Many of the activities involved and the noise levels generated would be broadly similar.
- 8.4.16. Notwithstanding the errors identified in the distance to the nearest residential receptor as stated above, I still consider the L_{Aeq} noise level of the correct distance will be less than the 70dB L_{Aeq} limit specified by BS 5228-1:2009, there will however be an onus on the appellant to comply with best practice as per the Guidelines in relation to noise generation. Based on this assessment and with the imposition of suitable and appropriate planning conditions, I am satisfied that the proposed development would not have a significant adverse impact on residential properties arising from noise. Should the identified limited exceedance arise, these can be addressed by way of control restrictions attached as conditions to a permission.

Shadow Flicker

- 8.4.17. The 2006 Guidelines recommend that shadow flicker at dwellings within 500m of a proposed turbine location should not exceed a total of 30 hours per year or 30 minutes per day and where this is not achieved. As noted above, there are no inhabited dwellings within 500m of the proposed turbines. The closest inhabited dwelling (H5) is located approximately 623m from the nearest proposed turbine location (T5). H5 is financially associated with the proposed development. The draft Guidelines 2019 do not refer to strict time limits but appear to be moving towards the elimination of shadow flicker from wind energy developments.
- 8.4.18. I note that the shadow flicker impact assessment has been carried out based on the two turbine model options under consideration for installation at the proposed development site: the Enercon E126 (with a blade diameter of 127m) and Nordex N133 (with a blade diameter of 133.2m). The defined study area was based on the 2006 Guidelines, which requires consideration of the potential shadow flicker effects at properties within 10 Rotor Diameter distance (in the case of E126 - 1,270m and in

the case of the N133 1,332m). A separate full shadow flicker assessment has been carried out for each model option, the results of which are outlined as follows:

Nordex N133

8.4.19. There are 16 sensitive receptors located within the potential shadow zone of the Graffy wind farm, which could experience some degree of shadow flicker from the proposed turbines of this development if N133 model turbines were installed. 9 of these dwellings are predicted to experience less than 30 hours of shadow flicker per year. 7 dwellings are predicted to experience over 30 hours of shadow flicker per year. 8 houses are predicted to experience over 30 minutes of shadow flicker per day. Considered together, there are 9 houses that are predicted to experience shadow flicker that is above the limits of 30 hours per year and/or 30 minutes per day.

8.4.20. In terms of total hours in the worst-case scenario If the N133 were to be installed at the site, H2 (an associated dwelling) would have experienced up to a maximum of 72 hours and 59 minutes of potential shadow flicker per year in the worst case scenario. This prediction is now reduced to 12 hours and 51 minutes per year, with sunshine data factored in. In worst case scenario predictions, this dwelling could experience a predicted maximum daily duration of 45 minutes and 37 seconds of shadow flicker. This is reduced to a maximum daily duration of 8 minutes and 2 seconds of Shadow Flicker per day, with sunshine data factored in. All other dwellings will experience less potential shadow flicker than this.

Enercon E126

8.4.21. There are 14 sensitive receptors which could experience some degree of shadow flicker from the proposed turbines of this development if E126 model turbines were installed. 6 of these dwellings are predicted to experience less than 30 hours of shadow flicker per year. 8 dwellings are predicted to experience over 30 hours of shadow flicker per year. In summary 5 houses are predicted to experience over 30 hours of shadow flicker per year. 8 houses are predicted to experience over 30 minutes of shadow flicker per day. Considered together, there are 8 houses that are predicted to experience shadow flicker that is above the limits of 30 hours per year and/or 30 minutes per day.

8.4.22. In terms of total hours in the worst-case scenario If the E126 were to be installed at the site, H2 (an associated dwelling) would have experienced up to a maximum of 66 hours and 35 minutes of potential shadow flicker per year in the worst case scenario. This prediction is now reduced to 11 hours and 43 minutes per year, with sunshine data factored in. In worst case scenario predictions, this dwelling could experience a predicted maximum daily duration of 43 minutes and 35 seconds of shadow flicker. This is reduced to a maximum daily duration of 7 minutes and 41 seconds of Shadow Flicker per day, with sunshine data factored in. All other dwellings will experience less potential shadow flicker than this. The full shadow flicker assessments for the proposed development is contained in Volume 3, Appendix 3 of the EIAR.

Results

8.4.23. The model results show that in the case of both alternative turbine models, no dwellings are predicted to experience shadow flicker impacts in exceedance of the annual DoEHLG guideline shadow flicker limits of 30 minutes per day or 30 hours per year. Where significant shadow flicker effects are experienced at a sensitive receptor, possible mitigation measures could include but are not limited to:

- Providing landscaping and other vegetative screening to block or mitigate potential shadow flicker effects and any direct views of the turbines;
- Blinds to be fitted to effected windows
- Multi-directional lighting to be fitted to effected houses.
- Implementation of the shadow flicker shutdown module in the relevant turbine(s), to stop the particular turbine(s) operating during predicted periods when shadow flicker may occur, thus removing potential for this effect on nearby dwellings.

8.4.24. I am satisfied that the appellant has proposed and demonstrated that control mechanisms would be in place for the operational duration of the wind energy development project to minimise shadow flicker to acceptable limits as per the Guidelines. The potential impact arising from shadow flicker on properties in the vicinity would not be significant subject to a condition to ensure that shadow flicker is minimised to this suitable limit. I consider that the issue can be adequately

addressed by way of a condition comparable to that employed in other permissions for wind energy developments, whereby provision is made for the implementation of a wind farm shadow flicker compliance and monitoring programme, details of which can be agreed with the planning authority. Accordingly, I am satisfied that significant residual impacts for human health would not arise from shadow flicker, as this would be addressed via the separation distances achieved and by the operational parameters, with scope to shut down specific turbines, as and when necessary.

Property Values

8.4.25. The appellant states in the EIAR that no research on the effect of wind farms on local property prices has been conducted in Ireland, but according to the Irish Wind Energy Association research from around the world has shown that wind turbines don't negatively impact on property prices. The results of assessments carried out on the impacts of windfarms on property prices in other countries including the US, Canada, UK and Scotland is also presented which all conclude no discernible negative impacts on property prices.

Residential Visual Amenity Assessment

8.4.26. A detailed Residential Visual Amenity Assessment (RVAA) with methodology is included as Annex 4-2. 11 no. wireframes portraying the two different turbine models are attached to Appendix 3 of Volume 3 of the EIAR and are also described under visual residential impacts sections.

8.4.27. The government Draft Wind Energy Development Guidelines 2019 (noting that this is not the guidance in force), advise in sub-section 6.18 a residential visual amenity setback distance for residential amenity purposes of 4 times the maximum blade tip height tip height should apply between a wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development, subject to a mandatory minimum setback of 500 metres. The maximum blade tip height of either of the two considered turbine models is 149.6m (N 133) X 4 = 598.4m. There are no habitable occupied houses within this rounded 600m distance at the Graffy wind park. There are c. 19 dwelling houses including one replacement planning permission within this ten times rotor diameter 1,332m distance from the proposed Graffy turbines. Many are financially associated with the proposal, including H5 the nearest house to a wind turbine. The 19 identified dwelling houses

within the maximum blade diameter distance of either turbine model considered would not experience any overwhelming/oppressive or overbearing effects on their visual outlook from either of the proposed turbine option models; with effects generally considered as largely Minor to Moderate with two houses having Slight impact. These residential amenity effects are not considered unacceptable as the change in views would not render the identified dwelling houses or sites as unattractive places to live, and therefore it is not considered that Residential Visual Amenity thresholds have been reached at these residential properties.

8.4.28. Cumulative impacts – although a number of other wind farm developments exist within 20km of the proposed development, the closest of these is at a distance of 7.3km (Anarget/Cronacarkfree). Given the intervening upland topography there should not be significant cumulative residential visual effect on residences. At these distances, of 7.3km and greater, the potential for significant cumulative impacts to population and human health with the proposed development are considered as limited. It should be noted that an assessment of the impacts to visual amenity and the receiving landscape are addressed under Chapter 3 LVIA of this EIAR and examined further under Section 8.3 above.

Community Consultation

8.4.29. Observers to the appeal assert that adequate meaningful consultation was not undertaken for the project. The draft Guidelines 2019 refer to the preparation of a Community Report, details of which would be submitted as part of the application. The information provided as part of the application and appeal which includes a 'Community Report' outlines the extent of community engagement and consultation undertaken by the appellant for this project, and this appears to adhere to the approaches supported by the 'Code of Practice for Wind Energy Development in Ireland on Guidelines for Community Engagement' (2016), as well as the 'Good Practice WIND – Good Practice Guide' (2012). Initial discussions with the local community commenced in September 2018 and a representative for the developers, actively engaged with the landowners and others in the community, by individually calling with householders.

8.4.30. A public meeting at Edeninfagh Parish Hall, Glenties, was scheduled for early April 2020, however this had to be cancelled due to the restrictions and safeguards

associated with Covid 19. As an alternative, a public information document, outlining information pertaining to the proposal, was circulated to 71 house owners/occupants in the vicinity of the proposed wind energy development. An information brochure was prepared to provide information about the proposed development and the ongoing Environmental Impact Assessment. This was delivered online via the public information website <http://www.graffywindpark.com/> rather than in person. 3,576 persons were recorded viewing information on the development, however only 8 no. submissions raised concerns about the project.

- 8.4.31. Both the EIAR and the Community Report state that a Community Benefit Fund (CBF) will be established upon commissioning of the wind park. The new Renewable Electricity Support Scheme (RESS), provides for a CBF with contributions set at €2/MWh for all generation produced. Subject to its commissioning, it is anticipated that the CBF associated with the project will be in the order of €200,000 per annum. In addition, individual lease payments will be made to landowners, on whose lands, the project is to be constructed. Furthermore, the developers have agreed to make annual compensation payments to households, located within 1 kilometre of any wind turbine. I consider the community benefit scheme to be broadly in line with those proposed for other wind energy developments in Ireland.

Recreation and Tourism

- 8.4.32. Section 4.4.6 of the EIAR examines those aspects of the proposed Graffy Wind Energy and Grid Connection Development which may potentially impact tourism and has been assessed in accordance with the guidance contained in the Bord Fáilte's "Guidelines on the treatment of tourism in an Environmental Impact Statement". It is noted that wind farms and their associated infrastructure are not project types described as an example in this guidance. However, it is anticipated that potential impacts of wind farms on tourism would be on landscape character, visual amenity, tourist perception of the area and visitor experience.
- 8.4.33. Several of the submissions received on appeal highlight the potential negative impacts that the proposal may have on tourist numbers visiting the area, in particular those visiting the region via the WAW and also hikers utilising the trails in the area. There are numerous trails in the Glenties region, including the Bluestack Way, the Gap trail, and the Slí na Finne loop, which passes close to the proposed wind farm

development site. These routes allow hikers to take in the wilderness, mountains, glens, lakes and rivers that characterise the landscape of central Donegal. Although Section 4.4.6 of the EIAR states that the area in close vicinity to the proposed development is less popular with hikers, a contradiction to this statement is claimed by observers on the appeal. The submitted EIAR contains no assessment of the impacts of the proposal on the WAW tourism route however I do note that the applicant's response to the third-party submissions received states that the proposed site cannot be seen from the Glengesh Pass Discovery Point (DP), which is the nearest DP on the WAW to the proposal. Having examined the existing DP points along the WAW, I can confirm that visibility of the site is not available from any VP. The only point along the WAW which offers a view of the wind farm site is eastwards from a brief stretch of the R261 just north of Ardara, from which there is a partial view of part of the wind farm at a distance of 17km.

8.4.34. Section 4.5.3 of the EIAR assesses the impacts of wind farm development on tourism and refers to numerous studies conducted nationally and in nearby Northern Ireland and Scotland, as well as further afield in Norway, Austria, America etc. While I acknowledge that wind farm development in the area would have an impact on visual amenity (this is discussed in greater detail under Section 8.3 above), the studies summarised in the EIAR demonstrate that there is no conclusive evidence that wind farm development have any adverse impact on local tourism. Tourists are broadly positive about the presence of wind farms in Ireland and negative perceptions can be minimised through good planning. There are no rights of way over the land and public access to the site is not currently permitted and the proposed development lands are in private ownership. The wind farm holds potential to impact on the tourism industry of the local area by virtue of potential disruption to local roads and traffic in this local area during the construction phase. This will be managed in agreement with the local Roads Office and in accordance with a Traffic Management Plan, to minimise disruption to the users of local roads during the project construction phase, anticipated to last 12 months. The construction of the wind farm is therefore predicted to have a negligible potential to impact on tourism in the local area.

Conclusion

8.4.35. I have considered all of the written submissions made in relation to population and human health. I am satisfied that the impacts identified would be avoided, managed and/or mitigated by measures forming part of the proposed scheme, and measures within suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of population and human health. Significant impacts on residential amenity would not arise based on the assessment above, and significant depreciation in the value of property in the vicinity would not be likely. I am also satisfied that significant cumulative effects are not likely to arise and that permission for the proposed development should not be withheld on the grounds of cumulative effects on population and human health.

8.5. Biodiversity

8.5.1. Chapter 10 of the EIAR, which is divided into five sub parts (i-v), deals with biodiversity, including flora and fauna. The application was also accompanied by a Natura Impact Statement (NIS). Whilst there may be a degree of overlap, the NIS is dealt with separately in detail in Section 9.0 below. The EIAR identifies key ecological and ornithological receptors, including species and habitats occurring within the zone of influence of the development where potential effects are anticipated.

Designated Sites

8.5.2. Section 10(i).12 of the EIAR outlines that the proposed development site lies in proximity to or is hydrologically connected to a number of designated sites of nature conservation interest, within the locality and further afield. Table 10(i)-6 presents the details of a total of 13 European Sites, in addition to a further 17 nationally designated sites, that are considered to be within the Zone of Influence (ZOI) of the proposed project.

8.5.3. Section 10(i) 12.3 of the EIAR states that two SACs are located within 1km of the proposed development namely the West of Ardara/Maas Road SAC (Site code: 000197) and the River Finn SAC (Site code:002301) and that these sites are situated adjacent to the proposed grid connection route, with further works being undertaken within sub-catchments feeding into watercourses which form part of these SACs. From an examination of the submitted maps and the NPWS map

viewer² it is clear that small portions of both of these sites are in fact within the proposed site boundary. The River Finn SAC also lies upstream of and is hydrologically connected to the River Foyle and Tributaries SAC (UK0030320), as such the proposals are also hydrologically linked to this SAC. In the case of West of Ardara/Maas Road SAC and pNHA, freshwater qualifying interests which are sensitive to water quality and habitat deterioration effects include freshwater pearl mussel (FWPM), salmon and otter. In the case of the River Finn SAC freshwater qualifying interests, which are sensitive to water quality and habitat deterioration effects include salmon and otter. These potential effects are discussed further within Sections 10(iv) and 10(v) of the Biodiversity Chapter in respect of the aquatic environment and FWPM respectively (see Section 8.5.21 onwards below for further details).

8.5.4. Potential impacts upon SACs and pNHAs arising as a result of the proposed development are largely limited to those associated with construction stage works which will take place within the catchments of these sites and as such may give rise to hydrological effects in addition to minor temporary disturbance to qualifying species, where sites lie in close proximity to the proposed works. Mitigation measures to avoid pollution and sedimentation at construction and operational stages derive from Chapter 6 Soils, Geology and Hydrology of the EIAR, in addition to those discussed within other sections of the Biodiversity Chapter 10, namely aquatic ecology 10(iv) and freshwater pearl mussel 10(v).

8.5.5. Section 10(i).12.4 of the EIAR states that no SPAs are located within 1km of the proposed development, however two sites are located within 15km of the proposed development namely the Derryveagh and Glendowan Mountains SPA and Lough Nilan Bog SPA. The potential for the proposed development to impact upon bird populations associated with these SPAs is discussed within Section 10(ii) of the Biodiversity chapter and within the Habitats Directive appraisals in the NIS, which accompany the EIAR.

Habitats and Flora

8.5.6. Chapter 10 (i) of the EIAR contains an assessment of terrestrial ecology and includes the results of the Ecological Impact Assessment (EclA) which was carried

² <https://dahg.maps.arcgis.com/apps/webappviewer/index.html?id=8f7060450de3485fa1c1085536d477ba>

out for the site. A habitat survey was first conducted on 8th September 2020, with further survey undertaken in February 2021. The survey was undertaken in accordance with the Heritage Council's Best Practice Guidance for Habitat Survey and Mapping (Smyth et al., 2011). All habitats were mapped and categorised in accordance with the Heritage Council's 'Guide to Habitats in Ireland' (Fossitt, 2000).

- 8.5.7. In general, the vast majority of the application site and its surrounds is comprised of a range of upland habitats including wet grassland, wet heath, upland blanket bog and lowland blanket bog. The proposed grid connection lies in proximity to a range of habitats including semi-improved grassland, forestry plantation, watercourses, heath and wet grassland. It is noted that the grid connection proposals will not give rise to the loss of any adjacent habitat with the proposals confined to the carriageway of the existing road/track on which the route is proposed, with the exception of a short length of grid connection between the local road to the north of the substation and the substation itself. The proposal will also involve the widening of the existing road and forestry track corridor between the wind farm and a local road, for a distance of approx. 4.7km to the north-east, which adjoins the R252 road further to the north. This route will also incorporate a new forestry access road, largely through an area of existing conifer plantation.
- 8.5.8. Seventeen Fossitt (2000) habitat types were identified within the study area and within the proposed site. These include the following; Eroding/Upland Rivers (FW2), Drainage Ditches (FW4), Dry-humid Acid Grassland (GS3), Semi-improved Wet Grassland (GS4), Wet Heath (HH3), Upland and Lowland Blanket Bog (PB2 & PB3), Rich Fen and Flush (PF1), Conifer Plantation (WD4), Scrub (WS1), Recently Felled Woodland (WS5), Hedgerows and Treelines (WL1 & WL2), Scattered Trees and Parkland (WD5), Exposed Siliceous Rock (ER1), Recolonising Bare Ground (ED3), Buildings and Artificial Surfaces (BL3). Habitats recorded within the site study area are identified in Figure 10(i)-1 to Figure 10(i)-4 of the EIAR.
- 8.5.9. Two of the habitats present are categorised are considered to be of local (higher) level importance. These are 1. Eroding/Upland Rivers (FW2) - Minor watercourses within the study area are considered to be of local (higher) level importance, with the Stracashel River being considered to be of International Importance given its designation as part of the West of Ardara/Maas Road SAC. And 2. Upland and Lowland Blanket Bog (PB2 & PB3) - The vast majority of the areas in which the

turbines, access road and sub-station are proposed, are comprised of lowland blanket bog, with occasional areas of upland blanket bog, on varying depths of peat and varying levels of moisture. These habitats have been subject to drainage for peat cutting and agriculture in some places and exist in a mosaic with areas of adjacent wet grassland, wet heath and bare rock. The EIAR states that these habitats are of relatively greater ecological value in the context of the site, however they are not of any special significance in the context of the wider locality in which such habitat is common and widespread. This habitat is therefore considered to be of ecological importance at the local (higher) level. These areas will be subject to relatively minor losses as a result of the proposal, totalling some 0.277km², such an effect is considered to be Significant (Moderate Adverse) in the absence of mitigation.

- 8.5.10. Losses to these habitats required in order to facilitate the proposed construction will be relatively limited in the context of the wider locality, in which large areas of these habitats are supported, with a maximum total of 45,158 m³ of peat to be generated through excavation during construction. I note this figure is quoted as 48,048 m³ within Chapter 6: Soils, Geology and Hydrogeology, where it is also stated that this excavated peat will be utilised to restore the landscape around the proposed turbine locations, substation location and turbine access road, furthermore any excess peat will be taken to proposed peat regeneration areas. Peat regeneration areas will be located at the entrance to the proposed access to turbines T1 and T2 and in areas of semi-improved grassland in proximity to turbine T4. The applicant states that it is considered that these measures will fully mitigate for predicted significant effects arising through the loss of areas of blanket bog required in order to facilitate the proposed construction. There are no further effects predicted in this assessment of terrestrial habitats to be affected by the proposed development.
- 8.5.11. There were no Flora Protection Order (2015) species recorded across the proposed site during the 2020 habitat surveys.
- 8.5.12. It is considered that the proposed development will give rise to a single significant effect, in respect of ecology, that being the loss of areas of lowland and upland raised bog required in order to facilitate construction of the proposed project at construction phase, in the absence of mitigation.

Terrestrial Mammals

- 8.5.13. Faunal surveys of the study area surrounding the site were carried out in tandem with habitat surveys and any mammal activity was also noted during specific bat and bird surveys undertaken. During bird and bat survey work undertaken by Woodrow Sustainable Solutions Ltd. red deer and Irish hare were recorded within the general vicinity of the site. It is considered that the relatively small areas of habitat, which will be affected by the proposed development are likely to be of relatively low ecological value for these species. A single potential sett and evidence of foraging badgers and latrines were recorded, however the potential sett was located over 250m from the closest aspect of the proposed works, that being the proposed grid connection route. On the basis of this information it is considered that the areas of habitat to be affected by the proposed development are of low importance for badger and therefore that the proposals have limited potential to impact upon this species.
- 8.5.14. Evidence of otter presence, namely a number of spraint locations, in addition to a number of potential holts, was recorded along the Stranagoppoge River. The potential holts were located at least 250m from the closest aspect of the proposed works, that being the proposed grid connection route, to the south. It is considered therefore that the lengths of watercourse in proximity to the application site, are likely to be utilised by otters for foraging and migration and as such are of local level importance for this species. The proposed development has potential to give rise to minor adverse effects upon otter, as a result of potential sedimentation and pollution of the freshwater environment and also possible disturbance as a result of construction noise and associated vehicular movements. Mitigation in respect of the aquatic environment is detailed within Chapter 6 Soils, Geology and Hydrogeology and Section 10(iv) -aquatic ecology- of the Biodiversity chapter and subject to the implementation of these measures it is envisaged that potential impacts upon otter will be fully mitigated.

Invertebrates

- 8.5.15. I note that one of the plant species recorded within the Upland and Lowland Blanket Bog (PB2 & PB3) habitats is 'devil's bit scabious', this was also recorded within the Semi-improved Wet Grassland (GS4) habitat. This species offers potential opportunities for marsh fritillary *Euphydryas aurinia*. The EIAR states that the

proposed site supports habitat which is marginally suitable for marsh fritillary with scattered devil's-bit scabious present throughout areas of the site, however no areas which support dense patches of the plant are to be lost as a result of the proposed development and in general habitat for the species within the site is considered to be largely unsuitable. During bird and bat survey work undertaken by Woodrow Sustainable Solutions Ltd. adult and larval marsh fritillary were recorded within the general vicinity of, but not within, the site. The proposals are therefore considered to have some limited potential to give rise to the killing of marsh fritillary larvae at the construction stage in the absence of mitigation. Such an effect is considered to be major adverse. Therefore, on a precautionary basis, an ECoW will be appointed for the duration of the construction works. The ECoW will undertake pre-construction surveys of the areas of habitat to be subject to subsequent clearance to establish the presence or absence of larval or adult marsh fritillary or any unrecorded dense patches of devil's-bit scabious within the site which may provide optimal opportunities for the species. Should any previously unrecorded dense patches of devil's-bit scabious be recorded within the scheme footprint these will be subject to careful inspection for eggs, larvae or pupa of the marsh fritillary. Should marsh fritillary be recorded during these surveys, works will cease in these areas, fencing installed around the suitable habitats used by the species and appropriate mitigation will be agreed with NPWS in association with a license application for the proposed works. Appropriate mitigation in such a scenario would include the appropriate timing of habitat clearance works to align with translocation of the caterpillars within the period between late- July and September or habitat clearance works within the flying adult period late-May to July. It is noted however that on the basis of the findings of previously undertaken surveys the probability of such a scenario arising is considered to be very low.

Bats

- 8.5.16. An impact assessment for bat population utilising the proposed site for Graffy Wind Farm was conducted and the results of same are presented under Chapter 10 part (iii) of the EIAR. In compliance with SNH et al. (2019)³, static bat recording

³ Scottish Natural Heritage, Natural England, Natural Resources Wales, Renewable UK, Scottish Power Renewables, Ecotricity Ltd, University of Exeter & Bat Conservation Trust (2019). Bats and Onshore Wind Turbines: Survey, Assessment and Mitigation

equipment was deployed during the Spring, Summer and Autumn of 2019 at the proposed turbine locations or at positions considered representative of the proposed layout. The three deployments each lasting a minimum of 10 nights were undertaken in conjunction with continuous monitoring of climatic conditions on the site to ensure recording windows were in line with compliant weather parameters. An assessment of potential bat roost features adjacent to the proposed development was completed, along with roost emergence surveys and bat activity transects.

8.5.17. Bat activity was recorded within the survey area for a minimum of five species, including common pipistrelle, soprano pipistrelle, Leisler's bat, brown long-eared bat and Myotis species. In the vicinity of the application site a total of 18 buildings and two trees were assessed for roost potential. Five of the buildings were assessed as having moderate or moderate to high roost potential. Of these only three buildings and a tree were considered to be within the 266 m ZOI of the proposed turbines. Despite low levels of bat activity recorded across the site, it is considered to support a bat a population of Local (Higher) to County Importance (also noting the regular occurrence of foraging/ commuting Leisler's bat).

8.5.18. In the absence of mitigation, the assessment found there is potential for significant effects on the following features that are considered to be of Local (Higher Value) to County Importance (for structure locations see Appendix I-Figure 2 (see Appendix 9 in Volume 3 of the EIAR).:

- Potential Construction Phase Direct Impacts - Roosting Myotis species/brown long-eared bat species bats at Structure 1 (derelict cottage near T4),
- Potential Construction Phase Secondary Impacts on foraging/ commuting bats from tree removal in the vicinity of T4,
- Potential Operational Phase Secondary Impacts - Bat foraging/ commuting habitat (for creation the bat buffer zone around turbines T4) for common pipistrelles, soprano pipistrelles and Leisler's bats,
- Potential Operational Phase Direct Impacts - Collision or barotrauma (specifically T1, T4, T5, T6) to common and soprano pipistrelle bats and Leisler's bat and secondary impacts on roosting bats at the T4 cottage – Structure 1 as a small transitional Myotis roost, with the possibility of supporting a hibernation roost

8.5.19. Proposed mitigation measures are outlined under Sections 6.1 to 6.4 of Chapter 10 (iii) which include:

- The development of a protection plan for the transitional bat roost identified at Structure 1 adjacent to T4.
- The development of a protection plan for the transitional bat roost identified at Structure 1 adjacent to T4, and
- The creation of bat buffer zones around turbines T1, T4, T5 and T6 to maintain a minimum separation distance of 50 m between blade tip and habitat features used by bats. The area where trees/ scrub is cleared to create the turbine buffers for foraging/ commuting bats must be rendered as unsuitable as possible and maintained as such over the lifetime of the wind farm. Post construction monitoring of these areas will also be required.

8.5.20. On the basis of the details provided I am satisfied that based on the surveyed use of the site by bats and the proposed measures to address works required to construct the development and reduce impacts on bat populations, the proposed development would not have significant adverse impacts on bats. The risk of collision with turbine blades during operation of the turbines would be mitigated by the positioning of the turbine blades sufficient distances from vegetation, by seeking the advice from a qualified ecologist and by following best practice and procedures during the operational phase.

Fisheries & Aquatic Ecology including Freshwater Pearl Mussel (FWPM)

8.5.21. Chapter 10 (iv) of the EIAR examines the impacts that the proposal may have on Fisheries and Aquatic Ecology. Chapter 10 (v) specifically assesses the effects of the proposed wind farm on FWPM and associated habitats in the downstream watercourses hydrologically connected to the site. The proposed development, including the proposed cable connection route, areas of road widening, and construction of a new access road, is located in the headwaters of two different river catchments (Owenea and Finn), both of which are significant. The Finn due to Atlantic salmon stocks and their occurrence within SACs and an extant population of freshwater pearl mussel, however the most recent comprehensive surveys could not find any pearl mussels. The Stracashel River, a tributary of the Owenea and the Owenea itself support current populations of FWPM. Both the Inland Fisheries

Ireland (IFI) and the National Parks and Wildlife Service (NPWS) were consulted during the course of the studies conducted.

8.5.22. The wind farm development footprint within the west/ south-western zone draining to the Stracashel (Owenea) is located within an area controlled by IFI, the state agency responsible for the protection, management and conservation of inland fisheries. The north-eastern area of the windfarm development footprint drains into Lough Foyle via the Stranagoppoge (Finn) and falls within the cross-border Loughs Agency's area of responsibility. The southern boundary of the site development (wind turbine locations) and associated drainage streams are located immediately above the upstream boundary of the River Finn SAC (Site code: 002301) on the Stranagoppoge River. The eastern end, where upgrading of the road for transport is proposed, intersects the Upper Stranagoppoge River, while a number of small undesignated watercourses drain to the SAC. A portion of the boundary of the West of Ardara/ Maas Road SAC (Site code: 000197) extends upstream along the Stracashel River, between 2 and 3 km downstream of the small watercourses draining the south-western portion of the immediate wind turbine boundary. However, the area beneath and immediately downstream of the proposed HC cable crossing of the Stracashel is within the SAC. Section 10.5.3.2 of Chapter 10 (v) states that the water courses within the windfarm development draining to the Stracashel River and the tributaries crossed by the cable route do not contain suitable FWPM habitat but do provide a hydrological link to the downstream sensitive areas. According to submitted survey results the nearest FWPM population is at least 5km downstream of the windfarm site, the nearest suitable habitat is circa 2.3km downstream from the site. A report on the FWPM surveys undertaken as part of this assessment is included in Appendix 10 of Volume 3A of the EIAR. The River Finn catchment has extant populations of FWPM and is not designated for the species.

8.5.23. Section 10.3 of Chapter 10 (iv) outlines the Fisheries and Aquatic Ecology Assessment Methodology used and Section 10.5 outlines the Baseline Conditions within and relevant to the study area. Field surveys to determine baseline ecology, fishery habitat and the water quality of streams within and downstream of the main development site where the turbines and access routes are planned were conducted in September and November 2020 and January 2021. These surveys were then

complimented through a fish stock survey by electrofishing. The following significant Annex II freshwater species and other species of conservation interest were identified - Atlantic Salmon, Lamprey (River, Brook and Sea), European Eel and FWPM. Potential effects were assessed for construction, operational and decommissioning phases of the development.

- 8.5.24. The source of the Stranagoppoge River, including several small 1st Order tributaries (10 in total) drain the north-eastern area of the site and the potential for works on site at various turbine locations to intercept drainage is outlined under Section 10.5.9 Site Survey: Main Wind Farm development area and is illustrated in Figure 6 (Volume 3A, Appendix 8). As indicated previously, the proposed cable route will connect the wind farm substation to the Tievebrack station in the west with a crossing of the main Stracashel River which will be under the riverbed via Horizontal Directional Drill (HDD)). Also, where there is insufficient headroom to install the cable above structures such as culverts/ bridges, HDD or damming and diversion will be used. The cable route will intersect 20 small, largely 1st Order streams, most of which are not designated for WFD purposes, and which drain to the Stracashel River (labelled C1 to C19, incl. C5b; Figure 11; Table 10.14). Concerns have been raised by several observers and the Department (DHLG&H) in relation to the proposed HDD process and the possible resultant impacts on water quality and fisheries, these possible impacts are assessed in further detail below.
- 8.5.25. In areas of proposed road widening and upgrading, there were intersections with an additional 7 no. small 1st Order non-designated streams that drain to the Stranagoppoge River (RW1-RW7; Figure 11; Table 10.14). The proposed construction of a new access road through Coilte forestry in the east of the development has the potential to intersect the upper reaches of 5 very small drains that flow into the Stranagoppoge River up to 1km downstream (NR1-NR5; Figure 11; Table 10.14). A description of the fish habitat survey findings and potential fisheries sensitivity of each of these streams is summarised in Appendix 8 of Volume 3A.
- 8.5.26. Section 10.6 details the Assessment of Potential Effects. Of the site drainage watercourses, Tributary 2, the source of the Stranagoppoge, was assessed at Very High sensitivity; although the sections of the stream within the site boundary held only trout, the ecological quality was assessed at High while juvenile salmon and the upper limit of the SAC occurred immediately below the site boundary. One

watercourse, Tributary 10, was assessed at High sensitivity since, although fish were absent due to the high gradient, the ecological quality was assessed at High. Five watercourses within the site boundary were assessed at Medium sensitivity because of the presence of trout (Tributaries 1 & 6) or Moderate ecological / physical habitat quality (Tributaries 4, 5, & 9). The remaining three watercourses (Tributaries 3, 7 & 8) were assessed at Negligible or Low sensitivity due both to a lack of fish presence and poor/ very poor ecological or physical habitat quality.

- 8.5.27. With regard to FWPM surveys two 100 metre sections of the Stracashel River were surveyed downstream of the Tievebrack substation. A total of 109 adult mussels were recorded across these two sections, however the condition of the habitat was poor with substrate heavily silted and bank collapse and undercutting noted. The Owenea River was surveyed in three locations downstream of the confluence with the Stracashel River, with two of these locations showing FWPM present. The EIAR states that the nearest FWPM habitat is c. 2.3km downstream of the proposed site.
- 8.5.28. The EIAR acknowledges that HDD may result in the escape to the watercourse of pressurised drilling fluids (bentonite/ mud) through rupture or “break-out” of the underlying bed material and movement beyond the base of the structure or from surface run-off caused by drilling fluid returns at launch (entry) and receiver (exit) pits. The main effects arising from such an escape could be medium to long-term as a result of either fish mortality, FWPM mortality and loss of population viability/ future persistence (e.g. Stracashel River and tributaries), habitat loss/ deterioration and the deterioration in the WFD informed ecological status.
- 8.5.29. The above concerns were also raised in the submission received by the Department in which they considered that inadequate detail was provided with regard to: 1. The distance of drill launch and receiver pits from the water courses and associated mitigation and 2. The frac-out plan, response actions and the assessment of associated environmental risks and impacts. In response to these concerns the applicant in their appeal outlines the detailed measures in relation to the HDD process provided in Section 7.5.1 of the EIAR and Sections 5.3 and 7.3 of the CEMP. In addition, Attachment 6 of the CEMP provides a method statement for the HDD and Attachment 7 includes an outline of the HDD frac-out mitigation plan, with an Emergency Response Plan provided in Chapter 8 of the CEMP. Further details in relation to HDD works are contained in the submitted NIS (Section 7.1.4) and are

discussed further under Section 9 of this report. This section of the NIS clearly states that the launch and receptor pits will be at least 25m from either side of the watercourse to be crossed and therefore will have relatively limited potential to give rise to significant sedimentation or other water quality impacts.

- 8.5.30. Mitigation by design is also outlined and the EIAR states that if sufficient headroom is available at a cable watercourse intersection, then the cable will be installed by trenching above the culvert pipe/ bridge so that HDD is avoided. Where HDD is required any effects of drilling noise and vibration are expected to be Slight for sites of High to Very High sensitivity because of the use of low rotation rotational drilling (HDD and Auger bore) that may at worst cause behavioural avoidance in fish. The rotational HDD activity will not involve repeated percussive blows such as would occur with pneumatic pipe ramming or pile-driving, and so vibration is not likely to have a significant impact on sensitive species. In addition, additional mitigation through the timing of works will also be implemented where possible and consultation with the IFI and Lough Agency will be undertaken if trenchless crossing is required during critical periods.
- 8.5.31. The assessment acknowledges that there is a direct hydrological connection between the proposed site and the Stranagoppoge and Stracashel Rivers, both important salmon rivers in this River Basin District, and therefore a potential route for suspended solids to reach key areas of the river. It is therefore important that sensitive aquatic areas of the site should be avoided during the construction phase. To this end mitigation by avoidance is proposed through incorporating a 50m wide watercourse buffer zone associated with construction works for the turbine bases as detailed in Chapter 7: Hydrology. However, the proposed location of Turbine 6 is between small tributaries that form as Tributary 6 (Figure 6), and the turbine will be 25m from the nearest of these tributaries. To address these additional risks a series of mitigation measures are also recommended to reduce run-off of suspended sediment and its associated environmental impacts, the details of which are outlined in Chapter 7 of the EIAR and include e.g., construction phase best practice measures, appointment of an Ecological Clerk of Works (ECoW) to monitor water quality etc. Mitigation will also be implemented through restrictions on timing of in-stream works e.g., Tributary 2 is the only key tributary within the main wind farm site boundary where trout are present; although no access track is proposed to cross

Tributary 2, any proposal to conduct in-stream works here will be avoided between 1st October and 30th April. Implementation of these measures will mitigate any significant effects relating to run-off of suspended sediments, release of pollutants and deterioration of habitat, thus ensuring that the overall significance of effects will be negligible with regard to potential for impact to the aquatic ecology of local rivers, in particular the Stracashel/ Owenea and the Stranagoppoge/ Finn, and their most sensitive receptors, including Atlantic Salmon and FWPM. In addition to the above additional mitigation measures specific to FWPM are also presented under Section 10.5.8 of Chapter 10 (v), these include for pre-construction investigations, sediment control (silt traps, check dams, settlement ponds), the employment of a specially qualified ECoW specialising in FWPM, toolbox talks, and specific water crossing procedures and mechanisms to ensure minimal siltation/pollution. A detailed peat slippage risk assessment was undertaken and is reported in Chapter 6 of the EIAR - Section 6.4.4 of the Soils, Geology and Hydrogeology chapter, this has been discussed in detail under Section 8.6 of this report and therefore shall not be repeated here, to summarise however the risk of peat slippage and potential to impact on the FWPM was considered to be not significant.

8.5.32. Regarding the potential release of other pollutants e.g., construction related fuels, plant fuel and spillages Chapter 7: Hydrology, outlines a series of measures to manage the probability of runoff of hydrocarbons and concrete while the CEMP specifies contractor requirements to prevent their run-off to watercourses. Mitigation by management and monitoring is also proposed which will include good site practices in line with EPA Integrated Pollution Prevention Control procedures. Section 5 of the CEMP provides an overview of environmental controls and includes a sub-section on the requirements for water quality monitoring.

8.5.33. The impacts on fish passage and possible temporary obstruction to same are also considered. Within the main wind farm development area, bottomless culverts are proposed at Tributaries 4 and 5, whereas HDPE pipes are proposed at all other access track crossings. The cable installation for the grid connection will require stream crossings that involve damming and diversion or fluming, or culvert replacement. All temporary culverts should ensure that passage for fish is provided as per IFI guidelines (2016). As per IFI and Loughs Agency guidelines, instream river works should be avoided during the salmonid spawning season and egg incubation

phases, 1st October and 30th April. Mitigation by fish translocation will also be undertaken if necessary.

- 8.5.34. At sites where culvert replacement is proposed along the cable route, IFI guidelines will be adhered to which require mitigations in salmonid watercourses. Mitigation by design is proposed to address any surface water run-off from hard surfaced areas during operation e.g. stilling ponds, check dams, vegetation filters, no direct discharge of storm water from site to watercourses.
- 8.5.35. Operational Phase impacts - The design of the wind farm and grid connection route have sought to avoid stream crossings where possible or use bottom-less culverts. It is expected that channel scour also will wash natural substrata into any proposed HDPE pipes within the wind farm area and also where replacement culverts are required for the cable connection route; this substrate will accumulate on the base and provide some replacement of the habitat lost due to pipe enclosure. Issues relating to watercourse crossings and in-stream works will have been addressed during the construction phase and the proposed mitigation by design will avoid any potential for long term habitat loss during the operational phase.
- 8.5.36. The impacts of decommissioning are likely to be similar to those of construction although probably of lower magnitude, as it is unlikely that any of the structures at or near to primary watercourses will be removed or modified in any way. For example, culverts/ bridges will remain in place for forestry and farm use.

Conclusion

- 8.5.37. I have considered all of the written submissions in relation to fisheries and aquatic ecology (including FWMP) and the relevant contents of the file including the EIAR. The planning authority's refusal reason no. 3 specifically in relation to FWPM and Atlantic salmon as qualifying interests of the West of Ardara/Maas Road Special Area of Conservation (site code 000197) and the River Finn Special Area of Conservation (site code 002301) are assessed in detail under Section 9 of this report below. I am satisfied that the potential for impacts on aquatic ecology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, by the proposed mitigation measures and with suitable conditions. I am therefore satisfied that the potential for direct or indirect impacts on water quality and aquatic ecology

can be ruled out. I am also satisfied that cumulative effects, in the context of existing and permitted development in the surrounding area, are not likely to arise.

Ornithology

- 8.5.38. Chapter 10 part (II) of the EIAR and the associated technical appendices (Appendix 7 of Volume 3A) addresses ornithology. Potential impacts of the development on birds are stated to include direct habitat loss, displacement and collision with infrastructure, including the moving turbine blades. The planning authority decided to refuse planning permission for the proposed development, partly as they considered the potential risks to golden eagle and the white-tailed eagle, both Annex I species, were not adequately addressed in the form of scientific evidence and conclusions. In addition a separate refusal reason (no.4) outlined that the submitted EIAR and NIS was deficient as it does not contain a scientific assessment on whether the merlin pair recorded in 2019 and 2020 form a significant portion of the populations that support the adjacent Lough Nillan Bog Special Protection Area (SPA) and Derryveagh to Glendowan SPA. For the purposes of this EIA, I have examined the impacts on all bird species, with a concentrated analysis of the potential impacts on golden eagle and white-tailed eagle. A detailed examination of any impacts on merlin species is carried out in the Appropriate Assessment outlined under Section 9, and a summary of same has been included under this section. In assessing possible impacts I have considered all aspects of proposed development.
- 8.5.39. The location of the site close to designated sites is questioned by some of the observers to this appeal. It is contended that the application should be refused due to the variety of bird species recorded on the site, including Annex I species. The site is not located within a SPA but there are a number in close proximity and their qualifying interests, together with other species of conservation concern are included on the target list of species for the purposes of assessment. The Key Ornithological Receptors identified include some Annex I species and the impacts on these birds are fully assessed in the EIAR. Concerns were also raised by third parties in relation to possible impacts that the proposed project may have on red grouse in the area and the nearby red grouse sanctuary. These concerns are also examined as part of the EIAR and also as part of the applicant's submitted response to observations.

8.5.40. Currently there is no existing formal national guidance document for the assessment of wind farm development impacts on bird species, but there are guidance documents available from a Scottish perspective, and these are frequently referenced when considering the impacts of Irish wind energy projects on birds. Empirical studies and other documents are also available to provide some scientific basis when assessing the potential impact of wind farms on birds, many of which directly relate to the Irish context. In assessing the project impacts, I have reviewed various studies and documents, including those referenced by parties to the appeal.

8.5.41. With respect to surveying for the project, detailed knowledge of bird distribution and flight activity is necessary in order to predict the potential effects of a wind farm on birds. The appellant asserts that the specialist studies, analysis and reporting were undertaken in accordance with various guidelines. The appellant's core data for the description of ornithology is based on bird surveys which were carried out in accordance with Scottish Natural Heritage (SNH)⁴ 2017 *Recommended Bird Survey Methods to Inform Impact Assessment of Onshore Wind Farms*. SNH Note (2017, update). Appendix 2 of Appendix 7, Volume 3A to the EIAR provides further detail on the survey effort implemented. Four Vantage Points (VP) were selected for the purposes of surveying, as illustrated on Figure 1 of Appendix 1, Appendix 7 of Volume 3A. I note that VP4 on the lower crags of Aghla Mountain in particular provides extensive views across almost the entirety of the site, including VP2 and T1 (conifer plantation). I am therefore satisfied that the vantage point surveys, including the areas to be covered, were undertaken in a manner that would facilitate a sufficiently comprehensive assessment of the potential collision risk for birds from the proposed turbines.

8.5.42. Section 10.(ii).57 of Chapter 10 of the EIAR details the potential ornithological zones of influence investigated as part of the study, these included:

- A collision risk zone for sensitive avian species extending 500m from the proposed turbine locations.
- For breeding waders, specifically golden plover, dunlin and curlew a buffer extending 800m from the proposed turbine locations.

⁴ SNH has now been remained and rebranded as NatureScot

- For breeding raptors, including hen harrier, peregrine merlin, as well as buzzard, sparrow and kestrel, a buffer extending 2km from proposed turbine locations.
- For breeding raptors, including golden eagle and white-tailed eagle a buffer extending 6km from proposed turbine locations.
- For wintering waterbirds, a buffer extending 5-6km from proposed turbine locations
- Wider area or hinterland of 2-6km from proposed turbine locations for ornithological study area.

8.5.43. The sensitivity of bird species present at the proposed development was determined according to definitions based on Percival (2003)⁵. These are stated in detail under Table 1 of Section 10 (ii).58 of the EIAR. It is noted that Percival (2003) predated the re-introduction of white-tailed eagles into Ireland (2007) – the Irish population has therefore been classed as having High sensitivity (similar to golden eagle). Methods to evaluate the magnitude of effects are outlined under Tables 2 to 4 of Section 10.(ii).62.

8.5.44. In line with NatureScot guidance (2017) titled '*Recommended bird survey methods to inform impact assessment of onshore wind farms*', surveying took place over a two year period spanning all times of the year. Section 10 (ii) 3.3.7 highlights difficulties in data collection in relation to bird surveys as a result of the Covid 19 restrictions. In particular survey opportunities were missed during the height of 'display stage' for breeding raptors such as hen harrier and merlin in March and April 2020. This section highlights however that the surveys were fortunate to have located nest sites in the vicinity for breeding merlin in both 2019 and 2020 (despite the restrictions in place). Despite the lack of survey days in 2020 the surveyors considered that the wider area raptor surveys in combination with information collected over 2019 were sufficient to facilitate robust assessment of potentially sensitive raptor breeding in the environs of the subject site. I am satisfied that the level of surveying would appear to be sufficient and appropriate relative to the scale and location of the project and the NatureScot Guidelines (2017).

⁵ Percival, S.M.2003. *Birds and windfarms in Ireland: A review of potential issues and impact assessment*. Ecology consulting, Coxhoe, Durham

8.5.45. Table 6 of Section 10(ii) 4.2 provides an annotated species list for the two-year bird survey at the site. Over the course of the two years 71 bird species were recorded seven species listed on Annex I of the EC Bird's Directive (whooper swan, white-tailed eagle, hen harrier, golden eagle, merlin, peregrine and golden plover), 13 species that are Red Listed (white-tailed eagle, golden eagle, red grouse, woodcock, black-headed gull, herring gull, grey wagtail, meadow pipit, whinchat, ringed ouzel, golden plover, redshank and curlew) and 21 species Amber listed on the BoCCI (2014-2019). Based on the desk-based study, the two years of ornithological surveys and criteria listed under Table 1 of Chapter 10 (ii) (Percival, 2003) which assesses the sensitivity of avian populations the following species were consider as key ornithological receptors; Whooper Swan (Medium sensitivity), Peregrine (Medium sensitivity), Hen harrier (High sensitivity), , Golden Plover (Medium sensitivity), Red Grouse (Medium sensitivity) and an assemblage of red listed breeding passerines including meadow pipit, grey wagtail and whinchat (all of which were classified as Medium sensitivity) White-tailed Eagle (High sensitivity), Golden eagle (High sensitivity) and Merlin (Very High). The remaining species recorded have a low sensitivity and include Sparrowhawk, Kestrel, Snipe, Jack snipe and other smaller species. Only non-breeding gulls were recorded on site.

8.5.46. Section 10(ii) 5.3 provides an Assessment of Potential Effects and provides details of possible impacts at the different phases of Construction, Operation and Decommissioning. Cumulative impacts are also examined. The risk to each species identified as having a medium, high or very high sensitivity is presented in the following sections of this report. According to Percival (2003) Very Low significance and Low significance should not normally be of concern, though normal design care should be exercised to minimise impact. Very High significance and High significance represent a highly significant impact on bird populations and would warrant refusal of planning permission.

Whooper Swan

8.5.47. Over autumn 2018, spring 2019 and autumn 2019 whooper swan were only recorded flying through the subject site on passage on 4 occasions and in relatively small numbers 3 to 23 birds. No roosts or foraging areas were found within 2km of the subject site. Taking account of the species 'Medium sensitivity' and the limited presence of low-level passage flights, the potential impact of construction

disturbance is considered not significant. Based on observed flight activity within the 500m turbine buffer over the winter months, the collision risk was predicted to be low, 0.76 collisions over 30 years. To take into account the limitations in the survey over the spring 2020 (due to Covid-19 restrictions) the collision risk modelling (CRM) was re-run to only account for survey effort and flight period during spring/autumn passage only (when sightings were higher), this as would be expected resulted in higher predictions of 1 collision every 12 to 23 years. Even at the highest collision rate this would be estimated to effect 0.07% of the RoI wintering population and thus the potential direct impact of collision risk on the species is not significant.

Red Grouse

8.5.48. According to the results of the bird surveys conducted it was estimated that the southern slopes of Aghla Mountain, above the windfarm site support 3-4 breeding territories, which stretch into the northwestern boundary of the 500m turbine buffer. While birds or evidence of activity was recorded within the 500m buffer zone, very limited nesting cover was noted, and it was therefore considered unlikely that red grouse breed on the lower slopes of Graffy Hill. Section 10(ii) 5.3.2.7 highlights how research suggests local red grouse populations may suffer some displacement during construction, however post construction numbers recover, and operational wind farms are generally considered to have neutral impacts on red grouse. I note the submissions received which express serious concerns in relation to the impacts of the proposal on red grouse populations in the immediate area. While I note that construction on site may initially result in a significant reduction in densities of grouse in the area, this effect is expected to be short lived and numbers would be expected to recover by year 1 post construction. Therefore, having examined the survey data available and considering the Medium sensitivity of the species and the temporary short term duration of construction activity I am satisfied that the potential for a secondary impacts on foraging red grouse would therefore be considered not significant.

8.5.49. The footprint of the operational wind farm will avoid suitable red grouse nesting cover. While not totally immune to collision risk, this species is predominantly ground based with low flights meaning they exhibit low vulnerability to collision, therefore the potential direct and indirect impacts during the operational phase of the proposed wind farm on foraging and breeding red grouse are considered not significant.

Peregrine

8.5.50. No impacts are anticipated for breeding peregrines as there were no breeding sites located within 2km of the proposed site and the availability of suitable nesting cliff was assessed as limited. Over the two-year study only two peregrine flight lines were recorded within the 500 meter turbine buffer and both flights were below the collision risk zone (CRZ). Therefore, based on low usage it is objectively considered that any potential collision risk or displacement caused by the proposal would be a negligible magnitude and therefore not significant.

Golden Plover

8.5.51. Over the two-year study this species was only observed on passage three times, with all records detected beyond the 500 meter turbine buffer. There is limited extent/availability of good quality breeding habitat within the subject site and a distance of >10km to the closest known breeding sites. No ecological link was established to the nearby SPAs within the potential zone of influence. Taking account of the low levels of flight activity and the negligible effects in terms of collision risk the potential impact during and after construction on golden plover is considered to be not significant.

Hen Harrier

8.5.52. During the two year study this species were only recorded foraging through the subject site on four dates all of which were outside of breeding season. No breeding activity was recorded within the 2km turbine buffer, and although nesting opportunities do exist these are largely associated with cover provided by commercial forestry plantations which are generally considered suboptimal locations for ground nesting hen harrier. No historical breeding is recorded for the site and the closest known breeding sites are >5km away, towards Ballybofey. Collision risk on site was estimated to be exceptionally low at 0.07 collisions over 30 years.

8.5.53. Based on the aforementioned it is considered that the potential impact of construction disturbance on breeding hen harrier is not significant. It is noted however that one bird was suspected of opportunistically roosting at the edge of a forestry plantation within the site over one night, therefore it can be assumed that there is potential for a level of one-off disturbance events during construction works that may result in the displacement of intermittently foraging birds, however given the

low numbers involved this potential displacement effect during construction is considered to be negligible and not significant. Operational turbines may have a localised effect, displacing the occasional individual foraging around turbines, however as indicated by the survey results hen harrier's are not exclusively reliant on the proposed site and potential secondary impacts on foraging carriers are considered of negligible magnitude and therefore not significant.

Other Red listed breeding passerines including meadow pipit, grey wagtail and whinchat

8.5.54. The above listed species were recorded within the 500m turbine buffer. Section 10(ii) 5.3.2.10 outlines the potential construction phase impacts on these species. In the case of whinchat two pairs were reordereed breeding in the vicinity of Graffy bridge. Although susceptible to displacement as a result of construction works this is unlikely given the temporary short-term nature of the people's works, as well as the low intensity of works scheduled for the Graffy Bridge area. Both whinchat and grey wagtail are susceptible to any impacts on water quality, fortunately stringent mitigation will be in place during construction to protect water quality due to the downstream FWPM and salmonid populations, therefore significant impacts are not expected as a result. Sections 10(ii).340 to 10(ii).344 examine the potential impacts at operational phase on these species. In relation to whinchat it is noted that as embedded mitigation a 9th turbine was dropped from final layout and exclusion of this turbine limits activity closer to the Stracashel River avoiding the potential for directly impacting on this breeding species and also avoiding the loss of suitable wet grassland used by the species for nesting. Operational impacts on breeding meadow pipit and grey wagtails are considered not significant.

Sparrowhawk, Kestrel and Snipe

8.5.55. Sparrowhawk - breeding territory was identified in the area around T1 and a felling buffer of c.100 metres is required around this turbine and therefore it is highly likely that this breeding site will be displaced, however, this species which often nests in commercial forestry is relatively tolerant of felling operations and should be able to readily relocate in the remaining woodland adjacent to the development. Impacts will be minimised through project design to ensure removal of vegetation at appropriate

times of the year i.e. out of breeding season. CRM demonstrates a collision risk of 0.25 per 30 years, It is considered that this magnitude of effect is negligible.

8.5.56. Kestrel - Nest locations recorded during the 2019 and 2020 breeding seasons were beyond the 500 meter turbine buffer, however potential nesting habitat within the works corridor of T4 was identified and the species was regularly recorded foraging and flying through the 500 meter turbine envelope during baseline surveys and it is considered that construction activities may have a localised effect. However kestrels are relatively tolerant species to certain kinds of human disturbance and given the short term and temporary nature of the proposed construction works and the availability of alternative foraging areas potential secondary impacts on foraging kestrels are considered negligible and not significant. CRM shows a collision risk of 5.01 per 30 years. Despite declining numbers, kestrel remain a common and widespread raptor in Ireland and nationwide this magnitude of effect on a single pair would be considered negligible. If considering the magnitude of effect on local kestrel populations then the magnitude would be assessed as low (c. 1-5% of local population affected). In view of predicted collision risk acting at a local level it is considered that the direct effects of the operational wind farm will be low and any potential secondary impacts are considered not significant.

8.5.57. Snipe - The baseline study identified 2-3 snipe territories within the proposed site. The site layout however avoids any potential habitat on wetter parts of the hill. The potential displacement effects on wintering snipe during the operational wind farm has been assessed as likely to be imperceptible based on the low densities of wintering birds recorded and the marginal quality of wintering wetland habitats available within the proposed site. Predicted collision risk was estimated to be low at 1.29 collisions over 30 years. The potential impacts from the operational wind farm on the wintering population is considered not significant. Compensatory measures are required to offset the potential displacement of 1-2 pairs of snipe breeding within 400m of construction works (as well as operational turbines). Areas beyond the 400m turbine buffer have been identified for the creation or enhancement of existing wet areas for breeding snipe. The core target area will be along the Stracashel river, and will tie in with enhancement measures for the breeding whinchat.

Mitigation as outlined in the EIAR

- 8.5.58. Direct habitat loss, particularly for waterbirds, arising from potential changes in water quality and regime of the local environment and receiving watercourses would be limited by virtue of the avoidance of both in-stream works and as the proposed major project infrastructure would not be within 50m of watercourses. Other mitigation measures and monitoring are detailed within the EIAR (Section 10(ii) 6) as part of the project proposals to safeguard water quality.
- 8.5.59. The project design features including embedded mitigation measures i.e. removal of originally proposed 9th turbine and relocation of 3 no. turbines away from recorded Merlin nest sites, are detailed in the EIAR. Further mitigation by avoidance was achieved by avoiding turbine placement in areas identified as attracting the most eagle flight activity. Construction phase mitigation measures include limiting timing of works in the northern sections of the site to be outside of bird breeding season, avoidance of any construction works within 500m of merlin nesting locations, the retention of a qualified ecologist/ Ecological Clerk of Works. In addition, fencing around turbine bases and access roads will also not be permitted. As mentioned previously compensatory measures are required to offset the potential displacement of 1-2 pairs of snipe breeding within 400m of the construction works. Measures specifically designed to ensure threats to water quality are mitigated against during construction for the protection of FWPM and salmonids are expected to be more than adequate to ensure any downstream avian receptors are also protected from any pollution or sedimentation effects.
- 8.5.60. Enhancement measures are also proposed and detailed under section 10 (ii) 6.1.2, these include the provision of nesting baskets for merlin and kestrel, implementation of habitat management measures designed to protect and enhance the fields of wet grassland along the Stracashel river for breeding whinchat, which implementation to be monitored as part of the post construction ornithological monitor program. In addition, it is recommended that the wind farm company provide funding support to a red grouse conservation project in county Donegal our neighboring county with potential to support breeding eagles. An alternative location for provision of carrion could also be investigated.

8.5.61. It can be concluded that the proposed development would not have a significant impact on the bird species assessed above. Impacts on Golden eagle, White-tailed Eagle and Merlin are considered directly below.

Mitigation specific to eagle species as outlined in the EIAR

8.5.62. The main mitigation methods proposed to reduce potential collision/mortality for eagle species largely related to measures intended to reduce the attractiveness of the site for foraging eagles i.e. application of strict farm hygiene protocol (rapid removal of carrion, control of lambing and calving in proximity to turbines). The current grazing regime in terms of livestock units will be retained across the upland portion of the 500m turbine buffer. A post construction monitoring program will be implemented to investigate post construction eagle activity within and adjacent to the wind farm site as detailed in Section 10(ii) 6.1.5. Surveys would be scheduled to coincide with Years 1, 2, 3, 5, 10 & 15 of the lifetime of the wind farm, including breeding bird, autumn migration / wintering birds' survey and corpse searches. These features are based on guidelines by NatureScot (formerly SNH). In addition to the mitigation measures listed above, the applicant states that as part of the post monitoring there is a contingency to adopt further migration measures if for instance white-tailed eagle activity in the area is seen to increase significantly. Should this occur the applicant proposes to install an automated system, such as IdeniFlight (currently being tested in the USA). This system employs artificial intelligence to detect any eagle activity beyond a 500m turbine envelop and if found instructs turbines to instigate curtailment measures as required i.e. automatic shutdown. This allows eagles and other birds to pass through the wind farm safely and has been shown to reduce fatality rates by 75-89%.

White-tailed eagle

8.5.63. This species was recently reintroduced back into Ireland (2007-2011) and over the last ten years birds have spread out from the release site in County Kerry to occupy breeding territories in Counties Kerry, Cork, Clare and Galway. White tailed eagles are red listed species (BoCCI) and are also listed under Annex I of the EU Birds Directive, though they are not listed as an SCI of any SPAs within Ireland. As Percival (2003) predates the reintroduction of this species (2007) a determination of avian sensitivity for the white tailed eagle has not been included as part of Table 1 of

section 10(ii) 3.3.2, however section 10.(ii).241 of the EIAR states that “As for golden eagle, it is considered that white tailed eagles are a species exhibiting ecological sensitivity to wind farm developments, due to a small (pioneering population); therefore it is appropriate that the Irish population should be classed as having a *High* sensitivity”. Figures 11 to 14 and Table 6 in Appendix 3 (Avi-fauna results: flight line maps of Appendix 7 of Volume 3A of the EIAR) provide data collected during VP watches and illustrate usage of the proposed wind farm site by white tailed eagles. Information collected during wider area eagle surveys is displayed in Appendix 5. Over the two-year study white tailed eagle flight activity through the 500m turbine buffer was recorded on seven dates (8no. observations) and involved at least two adults (1 tagged/1 untagged) and an immature subadult bird. The tagged bird recorded flying through the area on 20th March 2019 was identified as a female that fledged in 2014 at Mountshannon, Co. Clare, the same bird was also previously recorded in Scotland in 2017.

8.5.64. As outlined under Section 10(ii) 3.3.1 a potential ornithological zone of influence of 6km is applied as a buffer from proposed turbine locations for breeding raptors such as white-tailed eagle. Observations beyond the 500m turbine buffer were recorded on several occasions, the closest being over the southern slopes of Aghla Mountain. Although patches of mature trees and rocky cliffs/crags within 2 km of the proposed site do offer potential nesting opportunities, no breeding sites were identified within the 2km turbine buffer. It is considered that usage of the proposed site was typically by birds commuting through the area with foraging activity observed within or adjacent to the subject site associated with carrion on the slopes of Aghla Mountain.

8.5.65. Section 10(ii).142 of the EIAR states that these eagles are probably testing the boundaries of potential breeding season home ranges and it is considered likely that pairs will become established within 6 kilometers of the subject site in the coming years. Availability of suitably secure nesting crags/tree sites was assessed as limited within one kilometer of the proposed site; therefore it is considered that there is no risk of direct nest disturbance during the construction phase as there is no potential nesting habitat within the area directly adjacent to the proposed work corridor. It is noted that disturbance resulting from construction activities may have a localised effect, displacing individuals moving through the area on a given day, however, given the temporary short term nature of the proposed construction works, the availability

of alternative foraging areas within the wider area and the fact that levels of recorded usage of the area demonstrate that the species are not exclusively or even moderately reliant on the proposed development site, potential secondary impacts on foraging white-tailed eagles are considered of negligible magnitude and therefore not significant.

8.5.66. In assessing the potential operational phase impacts on the species, Section 10.(ii).308 states that white-tailed eagle show weak behavioral responses to wind farm avoidance and this behavioral trait has contributed to high levels of mortality in this species and even in Ireland a number of eagles have been killed due to turbine collisions (Fennelly,2015)⁶. During VP watches the species were recorded flying within the 500m turbine buffer for 3,694 seconds, with 3,134 seconds judged to be at heights within the collision risk zone. The majority of this time was accounted for by a bird foraging on carrion (dead sheep) over two consecutive days (28th and 29th April 2020) close to the edge of forestry in the northwestern boundary of the 500m buffer of T2 and T6 (see Figure 14 of Appendix 3). Based on observed flight activity within the 500m turbine buffer, the worst-case collision risk was predicted to be 7.32 collisions over 30 years (one bird every 3.9 years using a conservative avoidance rate of 95%). Given the small size of the population (12 pairs, A.Mee, IRSG,2018), the level of mortality predicted has the potential to have an adverse impact at the population level and if realised would result in an increase in annual mortality >1%. The applicant in their submitted EIAR also applied a higher avoidance rate, running the model at 98% based on recent studies of radio tagged birds conducted in Norway. The results of this generated a lower predicted value for collision related mortality, with worst case scenario (Nordex 133) of 2.79 collisions over 30 years (one bird every c.10.8 years). Section 10.(ii).314 then goes on to state that if (my emphasis added) the Irish white tailed eagle population supported roughly 38 pairs/adult birds and 85 subadults (c.161 birds in total), then the potential increase in predicted annual mortality due to collisions would be less than 1% (for 98% avoidance rates, worst case scenario) and therefore would be considered negligible according to Percival, 2003. However, I note that this is a substantially higher population estimate than the currently reported population, which is probably less

⁶ Fennelly, R.F. (2015). A review of Bird strike Mortality at Irish Onshore windfarms. CIEEM in-practice Issue88 June 2015

than 40 birds (IRSG Annual Reviews 2016,2017,2018), therefore in my opinion this portion of the applicant's EIAR assessment should be disregarded from further consideration given that there would appear to be no scientific basis for using the higher population figures which would result in an invented lower mortality rate.

8.5.67. While I accept the applicant's reasoning in this case, adopting the precautionary principle I assert that the more conservative avoidance rate of 95% is more appropriate in this case, in particular given the fact that the proposed wind turbines would form the first type of obstacle in the vicinity, which to date has been clear of any structures. In addition, the population estimates outlined under Section 10.(ii).314 are clearly not accurate or supported by evidence and therefore the most recent reported population of c. 36 birds should be used for the purpose of the assessment. I also note that Section 10.(ii).315 reinforces my point above highlighting that there are notable difficulties in utilising models for a pioneering population that ranges as widely as white tailed eagles and where the demographics and size of population is not fully known.

8.5.68. Refusal reason no.5 relates to both golden eagle and white-tailed eagle. The planning authority considers that potential risks to the aforementioned Annex I species have not been adequately addressed in the form of scientific evidence and conclusions and therefore to permit the proposed development would therefore be contrary to Policy NH-P-1. This refusal reason is supported by the submission received from the DoHLG&H. Their submission highlights that the predicted rates of mortality as demonstrated in the submitted CRM combined with the low fecundity of these large raptors, are likely to result in effects at the national population level. In addition to this the Department notes that the EIAR acknowledges that the outputs from the CRM do not take account of potential displacement of birds from the wind farm envelope, which for species breeding adjacent to the site may be more of a cause for concern. The Department also notes that flight seconds in height bands (Table 7: CH10 ii, EIAR) indicate that raptor activity was primarily focused in the CRZ. It should be noted at this point that the estimated collision rates highlighted by the Department in their submission are incorrect for white-tailed eagle (they state 1 bird every 7.81 years (weighted)) the correct figure of 1 bird every 3.9 years (as indicated under Section 10(ii).311 of the EIAR). This correct figure would result in an estimated mortality rate of 0.26 collisions per annum and is in fact more significant

than that originally quoted by the Department, showing an almost doubling in potential mortality rates. Given that the Department was concerned in relation to a lower mortality rate, the significant increase in numbers would be an even greater concern for this species.

- 8.5.69. From an examination of the Irish Raptor Study Group's Annual Review results for 2016, 2017 and 2018 the recorded population for the species is estimated at less than 40 birds. The applicant argues that the information submitted in the Department's submission is selective, and some statements inaccurate and overall that it fails to offer a robust investigation of the magnitude of effects. Section 10.(ii).315 of the EIAR states that based on a conservative predictive collision risk (employing the lower 95% avoidance rate) the proposed wind farm site at 0.26 birds per annum, and for a population of 36 birds (with c.30% sub-adult birds), the additional mortality that would result is <5% for which Percival (2003) considers the magnitude of this effect as Low i.e. a small but discernible reduction in the size or productivity of the population. I would firstly question the presented calculations in this case, as it is not clear if the applicant has used the total population figure of 36 birds or a lower figure removing the sub-adult population. I would also question the robustness of the applicant's information in this case given that the applicant has previously stated that there are notable difficulties in utilising models for this pioneering population. In addition to this I note that the applicant also states under Section 10.(ii).142 of the EIAR that it is considered likely that pairs will become established within 6 kilometers of the subject site in the coming years, with survey results demonstrating white-tailed eagle frequently recorded foraging and displaying within and adjacent to the proposed development site.
- 8.5.70. Having examined the information submitted, as well as the submission by the Department and taking into account the applicant's response in the submitted appeal, I am still not satisfied that sufficient evidence has been presented to demonstrate that there would be a low magnitude of population effect (>5%) and therefore a low significance as per Percival, 2003. In making judgments on significance, consideration is given to the population status, trends and distribution of potentially affected species within Ireland. The overall magnitude of effects is determined by taking three factors into account 1. the behavioral sensitivity of the species 2. the spatial magnitude of the effect 3. the temporal magnitude of the effect.

The behavioral sensitivity of white-tailed eagle has already been discussed under Section 8.5.66 above and it has been determined that they are highly sensitive to wind farm development. The results of the CRM show that the spatial magnitude of effect only examines mortality rates and does not examine in detail displacement or disturbance to this species. Another factor which also needs to be taken into account is the range and frequency of other raptor activity within and in the vicinity of the development site. Section 10(ii) 4.2 and Appendix 7 of Volume 3 of the EIAR indicates the high numbers of raptors recorded within the site and its vicinity and it would therefore appear the area site supports a high density and variety of prey species (i.e. beyond dead sheep, for which mitigation is provided) and is in favourable condition. As outlined in the Department's submission viable raptor territories, specifically eagle territories are rare in Ireland and will continually attract and draw new individuals into them, thus possibly in time magnifying the risk of reoccurring mortality and impacts on the national population.

8.5.71. In conclusion while the CRM worst case scenario may show results of 0.26 collisions per annum, which I acknowledge would then result in additional mortality of less than 5%, which Percival 2003 considers a low magnitude of effect, the nature conservation importance of the white tailed eagle when considered similar to that of golden eagle (for the purposes of comparison under Percival 2003) would still have a high sensitivity and given this combined with the determining factors for behavioral sensitivity as outlined above, I am not satisfied that the proposed development, would not have a significant adverse impact on the currently limited Irish white tailed eagle population.

Golden eagle

8.5.72. Golden eagles were reintroduced to Ireland between 2001 and 2012 and therefore are still considered to be within a pioneering phase. They are considered upland species, but traditionally sites in Ireland also include the use of ledges on sea cliffs. Nature Scot (SNH 2017) recommends a survey area extending 6 kilometers from proposed wind farm developments to account for eagle home ranges.

8.5.73. Over the two-year study (Nov 2018 to Aug 2020) golden eagle flight activity through the 500m turbine buffer was recorded on 16 dates (19 no. observations) and involved several different birds including adults and subadults. Foraging/hunting

birds were recorded utilising the turbine envelope, however birds tended to favour the upper slopes of Aghla Mountain. Some of the observations were thought to involve birds from the established pair from the BlueStacks patrolling the boundary of their home range. The site itself was considered to offer less attractive foraging opportunities, in terms of having limited cover for grouse and hare. No breeding sites were located within the 6km turbine buffer, however there was a profusion of territorial flight displays detected over numerous hills within the survey area by both golden and white-tailed eagles. Figures 5 to Figure 10 and Table 5 of Appendix 3 provide data collected during VP watches and they illustrate usage of the proposed site by golden eagles. Information collected during wider area map surveys is displayed in Appendix 5. During VP watches golden eagles were recorded flying within the 500m turbine buffer for 4,729 seconds, with 3,657 seconds judged to be at heights within the CRZ and the remaining time accounted for by flights above 150m. Flight activity involved birds foraging/hunting and commuting through the wind farm site. Much of the foraging activity along the southern slopes of Aghla Mountain, similar to the white-tailed eagle, was considered to be associated with occurrence of carrion (mainly dead sheep).

8.5.74. It is noted that all known established breeding territories are located more than 6km away from the proposed site in the Blue Stacks, Derryvagh Mountain and Slieve Tooley. The closest crags are located more than 2km away, above Lough Ea, Lough Finn and Lough Muck; however it is unlikely these relatively unsecure locations would be occupied given the species propensity to select more isolated locations. Availability of suitable nesting sites was assessed as limited within 1-2km of the wind farm site. Therefore, it is considered that there is no risk of direct nest disturbance during the construction phase, however given the increased level of site usage recorded over the second year of the baseline study (2020), it is considered that construction activities may have a localised effect, displacing individuals foraging through the area, but, given the temporary short-term nature of the proposed construction works potential secondary impacts on foraging golden eagle are considered of negligible magnitude and therefore not significant.

8.5.75. Potential operational phase impacts are examined under section 10(ii) 5.3.3.5 of the EIAR. As no nesting activity was recorded within the 6km turbine buffer and considering the probability of future occupancy within 1.5km of the works corridor

was determined to be highly unlikely, the EIAR states that it can be objectively concluded that there will be no secondary disturbance impacts to golden eagle breeding sites resulting from the operational wind farm.

8.5.76. Based on observed flight activity within the 500m turbine buffer, the worst-case scenario collision risk (weighted and applying avoidance rate) was predicted to be 0.06 collisions per annum, equivalent to one bird every 17.3 years. An Irish golden eagle population of 20-25 birds is assumed given figures presented in the IRSG Annual Review 2017, however I note the Golden Eagle Trust estimates that Ireland supports 22-28 individuals (2019) (see appeal document). Section 10.(ii).326 outlines that in a worst-case scenario if 18 birds were subject to a predicted collision rate of 0.06 collisions per year, the potential for direct impacts with turbines would contribute to an additional c.7% on annual background mortality. Due to low survivorship of subadults projected additional mortality resulting from direct impacts remains below 1% for this demographic. Therefore, based on Percival (2003) a population effect of 6-20% is classed as moderate, which for high sensitivity species would generate a potential direct impact of high significance. A displacement effect range from 6% to 46% is estimated based on birds exhibiting total avoidance of the turbine envelope, however based on the relatively low usage of the site by foraging golden eagles and the occurrence of suboptimal foraging habitats (plantations) the EIAR considers that the effect of potential displacement due to operational turbines will have a negligible effect on the regional population and therefore it would not be significant. In summary the EIAR states that operational phase has the potential to result in direct (collision) impacts of high significance however this is reduced to low/medium significance due to avoidance.

8.5.77. As stated previously under Section 8.5.68 refusal reason no. 5 also relates to golden eagle. Contrary to what the EIAR states the Department in their submission suggest that there would be displacement effects on a known golden eagle pair in the wider area located within 6 km (i.e. the Nature Scot buffer limits) to the northwest of the development site. In response to this the applicant argues that the Department's assessment uses a measurement derived from the distance of golden eagle territory to the application site inclusive of the underground grid connection substation, which they claim is not appropriate. Measuring the established territory from the proposed

operational wind farm site would result in a distance greater than the 6km zone of influence.

8.5.78. It is evident from Figures 5 to Figure 10 of Appendix 7, Volume 3A of the EIAR that the development site is an important foraging area for golden eagles. This assertion is confirmed by the Department in their submission, who also state that it likely forms an integral part of the home range /core territory of the pair nesting in close proximity (<6km). This pair constitutes approx. 20% of the national breeding population of this Annex I species and it follows that impacts to this breeding pair, must be considered to constitute an impact to the national population. The applicant argues that the slopes above the 500m turbine buffer were identified as likely to provide better foraging opportunities and that these upper slopes have been avoided by the proposed development. They also argue that in terms of food availability within the 500m buffer, carrion (mainly sheep carcasses) is likely to provide the only source of food and regular checks and removal of fallen stock as well as other carrion, would be an effective mitigation measure in limiting attraction of scavenging birds into the area (Section 10.(ii) 6.1.3).

8.5.79. Having examined the information submitted, including the recorded flight lines and records, I would not concur with the applicant's assertions and do not believe that it can be definitively determined that significant adverse effects on the species would be mitigated through the implementation of the proposed mitigation which merely concentrates on carrion removal and a post construction monitoring programme. What is of particular concern is the possibility that the site may be used in the future as part of either new or expanding golden eagle territories. It is already noted that birds from the established pair from the BlueStacks have been recorded patrolling the boundary of their home range, within the site. I am therefore not satisfied that the proposed development, would not have a significant adverse impact on the currently limited Irish golden eagle population.

Merlin

8.5.80. The crux of the issue in relation to ornithology on site, as discussed already above relates to the applicant's interpretation of species connectivity to the site and the NPWS's and planning authority's concerns in relation to same. This concern relates to both the possibility that the species recorded on site are connected with the SPA

or that their displacement may have impacts on the population of the SPA. The applicant states that SNH (NatureScot) (2016)⁷ guidance recommends that connectivity to sites designated for merlin should be considered up to 5km. Two separate recordings of a pair of merlin and nest locations adjacent to the windfarm site were noted in 2019 and 2020 and therefore the applicant did note that there was potential for construction, operational and decommissioning activities to result in disturbance or displacement of this pair. Displacement of this pair during the breeding season, could put pressure on neighbouring pairs in terms of nest site competition, which could adversely affect merlin populations within both neighbouring SPAs. Based on the findings of the ornithological impact assessment (Section 10(ii) 5.3.2.2 and 5.3.3.2 of the EIAR), the submitted NIS concludes in relation to breeding merlin population within the SPAs, the 2019 and 2020 nesting locations were 5.2km and 5.1km respectively from the boundary of the Lough Nillan Bog SPA at its closest point. For the Derryveagh and Glendowan Mountains SPA, the segment encompassing Lough Finn was 3.1km and 3.3km from the 2019 and 2020 nest sites, respectively. However, the assessment states that the lough does not provide suitable merlin nesting habitat and the distance for parts of the SPA encompassing suitable nesting area are in fact located at 7.1km and 7.3km from the 2019 and 2020 nest sites respectively. On the basis of separation between the breeding sites and the SPAs, which are either close to or surpass the maximum territory size of 6km reported for this species, the EIAR states that this pair is considered unlikely to comprise a part of the population of the Lough Nillan Bog SPA and does not form part of the population within the Derryveagh and Glendowan SPA.

8.5.81. Merlin is an SCI species for both the Lough Nillan Bog SPA and Derryveagh and Glendowan Mountains SPA and are also listed under Annex I of the EU Birds Directive. One breeding pair was recorded just beyond the 500m turbine buffer, south of T2, with two different nest sites occupied in 2019 and 2020, and also corvid nests in tree lines utilised. The locations of these nest sites are illustrated on Map1 of Appendix 7 (Confidential Appendix in Volume 3A) and the merlin pair successfully fledged young in both years. Site visits in 2021 found that neither of the previous sites utilised were occupied. Section 10.(ii).237 states that due to potentially logical links to populations within two SPAs, breeding merlin at the wind farm site were

⁷ SNH (2016) Assessing Connectivity with SPAs Guidance (Version 3).

classed as having Very High sensitivity (Percival, 2003). The combined population of the SPAs is reported as 11 to 16 pairs, based on site synopsis for both SPAs.

- 8.5.82. No other merlin breeding activity was located within the 2km turbine buffer and it was considered unlikely that there were any additional pairs in the wider area. The majority of flight lines detected were associated with nest site activity and were beyond the 500m turbine buffer. It is noted that merlin was also encountered, though less frequently, during non-breeding season (September 2020).
- 8.5.83. The distance from both recorded nest sites (2019 and 2020) and the nearest SPAs (as already outlined under Section 8.5.80 above) is reiterated in the applicant's appeal statement, where they state that on the basis of spatial separation between the breeding site and the SPAs, which are either close to or surpass the maximum territory size/distance of 6 km, this pair is considered unlikely to comprise a part of the population of Lough Nillan SPA and does not form a part of the population within the Derryveagh and Glendowan Mountains SPA. This is in contrast to what is stated in Section 10.(ii).103 which identifies specific risk of disturbance to, or displacement of, the merlin pair breeding at the windfarm site and states that this is likely to put pressure on neighbouring pairs in terms of nest site and home range competition. This conflict is also highlighted in the submission received from the Department
- 8.5.84. The likelihood for construction related activities to result in displacement of the resident pair of merlin are discussed in Section 10(ii) 5.3.2.2. Following surveys potential nesting habitat was identified within the works corridor (trees) around T1 and T4 and therefore if merlin shifted nest location there is potential for construction works to result in direct disturbance of merlin nests. There is also potential for secondary disturbance to breeding merlin if either of the nest sites used in 2019 and 2020 were re-occupied during the construction phase of the project. Based on Percival, 2003 the potential magnitude of effects on the merlin population within local SPAs due to a potential reduction in productivity caused by construction related disturbance or displacement of a single pair was assessed as Moderate. However, Section 10.(ii).238 states given the temporary-short term nature of wind farm construction (12-18months) the order of magnitude was reduced to low, thus returning an impact of Medium significance overall according to Percival, 2003.

- 8.5.85. Section 10.(ii).239 acknowledges that the works corridor for the wind farm is considered to be within the foraging range of merlin breeding area and therefore it can be assumed that there will be a level of disturbance during construction works that may cause displacement. However, the EIA states that the size of the works corridor relative to foraging habitat available in the wider area means that any potential displacement effects during construction is considered to be negligible, and in the view of the temporary nature of works potential secondary impacts on foraging merlin are considered as not significant.
- 8.5.86. Section 10.(ii).166 states that ground nesting opportunities were assessed as virtually non-existent in the environs of the wind farms site due to the lack of ground cover, with the exception of the area around T1, which has patches of denser heather growth. Breeding season VP watches accounted for >90% of the flight time recorded and the CRM was run to account for higher breeding season usage of the area. The worst-case predicted collision risk (using predictions for Nordex 133 turbine) was 0.73 collisions over 30 years, these low results were primarily due to merlin flight heights being predominantly below the rotor swept area. The EIAR goes on to further state under Section 10.(ii).302 how windfarms are generally considered to pose a low collision risk for merlin, which exhibit agile fast flight behavior predominantly below the rotor swept volume and that therefore, it is considered that the magnitude of effect is negligible and although merlin is classed as having Very High sensitivity at this location the potential impact due to collision risk from turbines was found to be not significant. Potential indirect operational impacts are considered to be of Medium significance and require carefully considered mitigation measures to be implemented i.e. restriction of fencing on site, timing of construction works to avoid bird nesting season and also more specifically the provision that if any alternative merlin nests are found during construction works, a 500m buffer zone will apply where all works will only be permitted outside of bird breeding season.
- 8.5.87. The Department's submission in relation to merlin is noted and in order to ensure no repetition of information or assessment in relation to connectivity with SPAs in the vicinity I would advise the Board to consult also with Section 9.16 of the Appropriate Assessment. In summary however, having considered the information submitted as part of the EIAR, including the submitted additional 'confidential information' (merlin flight records and record tables) submitted with the appeal, I am not satisfied that

sufficient information exists to allow me to determine that there would be a 'Low' magnitude of effect during construction on a species of 'Very High' Nature Conservation Importance. In the case of the merlin pair which have utilised the site in the past (2019 and 2020) there is no guarantee that they will not use the site again in the future, notwithstanding the fact that no nest site was found during 2021 surveys. While I acknowledge that the nests previously recorded to the south of the site were within close proximity to the local road (45-95m) and to a dwelling house (180m), the levels of noise and general disturbance from these uses cannot be compared to that of the construction activities involved for a windfarm. Having noted the measures proposed to mitigate the indirect moderate effects on merlin as part of the EIAR, I am still not convinced that these would eliminate all significant adverse impacts. In addition, despite the applicant's assertions regarding the general unsuitability of the site for ground nesting opportunities, an area of dense heather is identified close to T1 and also the submitted flight plans clearly demonstrate the use of the area for foraging opportunities. In essence it is my assertion that the proposed development would fail to ensure the continued presence and reproduction of merlin in their current area of distribution in Donegal.

Overall Biodiversity Conclusion (including ornithology)

8.5.88. With the exception of those species outlined below, it is considered that the value of the development site and surrounding area for biodiversity, has been adequately surveyed and quantified and allows for an evaluation of impacts to be completed and the EIAR conclusions in relation to the residual impacts on biodiversity can be supported by a reasoned methodology. However, for the detailed reasons outlined in the sections above, I am not satisfied that the proposed development, would not have a significant adverse impact on white-tailed eagle, golden eagle and merlin. Development of wind turbines at the height, scale and siting proposed would likely pose a significant risk of collision for Annex I bird species, inclusive of white-tailed eagle, golden eagle and perhaps to a lesser extent merlin (given their lower foraging levels). In addition, the proposal during construction, operational and decommissioning phases would reduce the attractiveness of the area for foraging raptor species which are evidently so prevalent at this location and in turn may cause displacement of species, substantially eroding the quality of the environment for these sensitive bird species and affecting roosting and breeding sites.

8.6. Soil, Geology and Hydrogeology

- 8.6.1. Section 6 of the submitted EIAR assesses and evaluates the potential for significant impacts on soil, geology and hydrogeology. Investigations undertaken by the appellant comprised desk studies of the windfarm site, the grid connection route and the surrounding study area, alongside field surveys carried out on several occasions between October 2018 and December 2020, in which they mapped peat depth and condition at over 1,700 locations across the site, slope measurement, measurement of peat strength and collection of geological and geotechnical data. Ground conditions recorded at the turbines, substation and transport route upgrade are summarised in Table 6-4. Survey positions are shown on Figures 6-5 to 6-11. Data collected for the previous application on site (ABP Ref: PL 05B.237656) from 2009 was also used.
- 8.6.2. The applicant states that the findings from the desk-based study and field surveys were used to modify the site layout. Alternatives were considered for turbine locations, substation location and wind farm access roads. Areas with steep slopes and deep peat were avoided in the site layout as far as possible, and further field surveys were carried out to assess any subsequent modifications to the site layout. The 2019 draft revised Wind Energy Guidelines largely mirror the 2006 guidelines in terms of the scope of soils/geology assessment. In addition to the above, the draft revised Guidelines require an assessment of peatland hydrology and carbon balance.
- 8.6.3. Turbines are proposed between elevations of approximately 200mOD and 292mOD. According to the GSI – Geology of South Donegal, the subject site is underlain largely by the Termon Formation and Slieve Tooley Quartzite Formation. Bedrock outcrop is frequent across the wind farm site. The GSI vulnerability rating of the entire wind farm site as extreme indicates bedrock at or close to ground surface. Along the grid route, the vulnerability is high and moderate indicating depth to bedrock of 3m to 5m, and 5m to 10m, respectively. Much of the site is covered by blanket bog, which has developed in the last 6,000 years. The peat was found to be up to 5.4m deep within the wind farm site but is generally less than 1.0m on the hillside north of the public road. Peat depth to the south of the public road was probed in 2009 and is generally deeper, however I note that no development is

proposed in this area. From the findings of the walkover and site surveys it can be determined that the turbines are located in areas of varying peat depths, generally less than 1m, but up to 3.7m. The deep peat is found to have developed in narrow basins between rock ridges. The average value of peat strength within the site is 23kPa and the median is 20kPa.

- 8.6.4. The GSI has rated the aquifer vulnerability as extreme across the wind farm site. At the transport route upgrade and along the grid route it varies from moderate to extreme. Turbines are mostly located in areas with an extreme vulnerability classification; however, the applicant states that the nature of the proposed development doesn't present a significant risk to groundwater quality due to the low permeability of the peat and rock and the slopes and due to the fact that most of the rainfall incident on the site will result in surface water runoff.
- 8.6.5. Based on available data from the GSI, there are no records of slope failure within the wind farm site, along the proposed grid route or the proposed transport route upgrade. GSI records indicate that several landslides occurred between 2km and 5km to the south / southeast of the site. The GSI landslide susceptibility maps most of the Graffy site as 'moderately low' to 'moderately high', with some areas classified as 'high'. The areas mapped as 'high' coincide with the steepest slopes (generally upslope of the proposed development) and not necessarily with the occurrence of peat. Following the site walkover, a review of the potential for a landslide hazard as outlined in Figure 1.1 of the Scottish Executive – Peat Landslide Hazard and Risk Assessments (April 2017) was carried out by the applicant. The site walkover did find evidence of localised peat deposits >0.5m deep on slopes more than 2°. Section 6.2.7 therefore states that a construction-related peat stability assessment was necessary for the wind farm site. This is discussed further in Section 8.6.9 and 8.6.10 below.

Construction Activities

- 8.6.6. For the purpose of access road construction, a dedicated on-site borrow pit is not proposed; it is envisaged that sufficient rock can be won where the road alignment passes over bedrock ridges which need to be cut to achieve vertical gradients. The importation of rock from local quarries will also be required. Deep peat has been

avoided based on the probing carried out, so floating roads are unlikely to be needed.

- 8.6.7. Construction of hardstand areas and turbine assemblage areas, which will also involve the excavation of rock and peat, and disposal /reuse of spoil. This too will involve the reuse of rock won during the excavation works. Cranage areas are not generally floated on peat as the crane stability is critical during lifts. The assembly areas may be floated to reduce the volumes of peat excavation. For the size of turbine proposed, foundation excavations will be approximately 25m across and approximately 3m deep. Excavated soil and rock will be reused as ballast on the foundation and peat will be reused in landscaping. Construction of turbine and met mast foundations will require large volumes of concrete (500m³ per turbine typical and 100m³ for the met mast, subject to detail design) which will place demand on local concrete batching plants / quarries. Piled foundations are unlikely to be required at this wind farm site. Construction of some roads and turbines will involve the introduction of heavy machinery to fell and remove the timber. This work could potentially lead to soil compaction and erosion. This construction felling area will not be replanted. The applicant states that an alternative, remote, replacement area in the townlands of Sonolaun and Kilmovee in County Mayo will be replanted subject to Forestry Service approval.

Potential impacts

- 8.6.8. Pre-construction Phase - site investigations will be required to inform detail design of turbine foundations, substation foundations, road design, HDD techniques etc.

These works are likely to have the following potential impacts:

- machines used will cause compaction to peat / soils along the access route which if unmitigated would result in direct momentary to brief imperceptible negative impact on peat / soils.
- use of hydrocarbons would present a risk of soil contamination if spills or leaks occurred.

- 8.6.9. Construction Phase – Peat stability is assessed in further detail under Section 6.4.4 of Chapter 6. Several observers to the appeal raise serious concerns in relation to the risk of peat slide and bog burst on the subject site. The applicant outlines the factors that could influence the failure of slopes during the construction of a wind

farms which include: 1. The nature of the peat, 2. Interference with site drainage, 3. Stockpiling of material on peat, 4. Inappropriate dewatering operations, 5. Excavation of roads through areas of weak peat and 6. Triggering events such as traffic movements or blasting for breaking out rock. This section of the chapter also refers to previous documented bog bursts in Donegal as well as major events throughout the country. The applicant highlights that the most recent construction-related peat landslide occurred during the construction of the Meenbog Wind Farm, County Donegal on 12 November 2020. This event is also referenced by numerous observers. The applicant states that they have carried out a review of the publicly available information to assist in the understand of the triggering events, the ground conditions that are susceptible to peat slippage and how these compare to the Graffy site. During the Meenbog project the slippage occurred during the construction of a floating road to turbine T07 in an unplanted area. The applicant states that the ground conditions found at the Meenbog Wind Farm site do not occur within or near the development footprint of the Graffy Wind Farm site and outlines the following:

- Extensive areas of deep peat do not occur at the Graffy development as they do at Meenbog. One area where uncontained deep peat occurs on the subject site was avoided by relocating turbine T06 – refer to Figure 6-8. Areas of deep peat to the south of the public road at Graffy are also avoided. As such, peat slippage that occurred at Meenbog in terms of size, extent and negative effects of the environment can't occur at the Graffy site.
- The use of floating roads is not proposed for the Graffy site. Floating roads are not required as the areas of deeper peat have been avoided. The total volume of peat to be excavated is estimated at 48,048m³ (or 60,060m³ with a 25% bulking applied, which is considered unnecessary for peat), or approximately 7,508m³ per turbine. In the case of Meenbog this figure was 13,0004m³ per turbine.

Peat Slide Risk Assessment

8.6.10. A Peat Slide Risk Assessment is presented under Section 6.4.4 of the EIAR. Eight classifications for landslide susceptibility are mapped, ranging from Low to High. Most of the Graffy site is mapped as 'moderately low' to 'moderately high', with some areas classified as 'high'. The areas mapped as 'high' coincide with the steepest slopes and not necessarily with the occurrence of peat. There are deep peat

deposits at the site, but slopes are generally $<2^\circ$ where these occur, the peat cover is thinnest on the steeper slopes, which range up to approximately 15° . The Wind Farm Planning Guidelines (Appendix 4 – Best Practice for Wind Energy Development in Peatlands) requires that a geotechnical and landslide risk assessment ‘is be carried out where depth of peat is in excess of 50cm’. A peat Landslide Risk Assessment was therefore required for the Graffy site. The Scottish Executive Guideline on Peat Landslide Hazard and Risk Assessment⁸ is used to provide a qualitative risk assessment using judgement and semi-quantitative rating scales. In the case of the current site the risk assessment process is presented for thin to moderately deep peat cover on glacial tills and /or rock. The subject site has been divided into two Zones, 1 and 2 and a factor of safety (FOS) is calculated for each zone using site specific worst-case measurements, including slope, peat depth, bulk unit weight for peat and un-drained shear strength of the peat. The estimates for both Zones are as follows:

- Zone 1 – Areas of the hillside with steeper slopes but with thin peat generally less than 0.5m but up to 1m. The average slope of the hillside from the highest turbine (T02) to the public road is 7° . Taking a worst-case scenario of 1.5m peat on a 15° slope with a bulk unit weight of 10.3kN/m^3 and a shear strength of 9kPa (lowest recorded shear strength value), the factor of safety in Zone 1 = 2.33.
- Zone 2 - Peat depth is typically $<3\text{m}$ but has been probed to 3.7m. Slopes are generally 2 to 3° . Taking a worst-case scenario of 3.9m peat on a 4° slope with a bulk unit weight of 10.3kN/m^3 and a shear strength of 9kPa (lowest recorded shear strength value), the factor of safety in Zone 2 = 3.22.

8.6.11. FOS values greater than 1.3 are considered stable. The applicant states that it is important to recognise that the situations above do not occur on the site; it represents a combination of factors that would give rise to a worst-case situation. The assessment concluded that the likelihood of a construction-related landslide in: Zones 1 and 2 and the transport route upgrade is considered ‘Unlikely’.

⁸ [Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments \(www.gov.scot\)](http://www.gov.scot/Resource/0/4/04009/nid24533/eng/Peat_Landslide_Hazard_and_Risk_Assessments_Best_Practice_Guide_for_Proposed_Electricity_Generation_Developments.pdf)

- 8.6.12. The exposure of the site to landslide in terms of project cost is estimated as very low impact. In terms of environmental impact, the wind farm is adjacent to the upstream section of the River Finn SAC and upstream of the West of Ardara/Maas Road SAC. The streams draining the site feed into these SACs. Based on the nature of the peat (depth, confinement by rock ridges etc), the impact to the SACs would be very low impact. Figures 6-5 to 6-9, demonstrate that areas of peat depth greater than 1.5m are small within the site. Indicative risk is outlined under Table 6-12. Potential impacts on designated sites are discussed in greater detail under Section 9 Appropriate Assessment.
- 8.6.13. The indicative risk level for the two wind farm zones 1 and 2, and the transport route upgrade is negligible. The action suggested for this project risk ranking is the 'Project should proceed with monitoring and mitigation of peat landslide hazards at these locations as appropriate'. The site layout and construction methods proposed have been refined to avoid the areas within the site which drive the probability score for Zone 2.
- 8.6.14. A total peat volume of 22,888m³ is expected to be excavated as part of the road and foundation construction, with peat depths of up to 1.2m in some areas (T05/T06 Junction to T05). 25,160m³ of peat spoil is expected to be removed during turbine and substation construction. Where peat is removed, peat turves (acrotelm) catotelmic peat will be carefully placed separately to one side of the road for reuse in roadside restoration. Excess catotelmic peat will be taken to the nearest peat restoration area. Areas where peat can be placed include the cutaway areas at the site entrance to turbines T01/T02, the improved grassland near turbine T04 and smaller areas at most turbine locations. Peat regeneration areas will have rock and earthen berms to contain peat.
- 8.6.15. In addition to peat stability, rock stability is also examined in Chapter 6. The excavation of rock cuts for roads and cranage areas will increase rock slopes locally, which may increase the potential for rock falls along these cuts, however mitigation measures to address these risks are provided.
- 8.6.16. Sections of the public road will be strengthened and widened to facilitate delivery of over-sized loads. Where widening is needed, it will be done on the upslope side of the road. In addition to the rock won on site for road construction, the estimated

volumes of stone to be imported for road and hardstands is 8,525m³. For the grid connection works (c. 7.3km long) the cable ducting will be installed in a trench with approximate dimensions of 1.25m deep and 0.6m wide. Its excavation will generate approximately 5,475m³ of spoil. This will consist of a range of materials, from tarmac, class 804, tills, peat and rock. Additional materials such as lean mix (2,519m³) and class 804 backfill (2,956m³) will be required for backfill during the cable route construction.

Hydrogeology & Groundwater

- 8.6.17. Removal of peat and subsoils may result in the exposure of the underlying rock to sources of contamination and may permanently increase the vulnerability of the aquifer within the development footprint. Pollution may occur as a result of spillage or leakage of fuels. One private well serving a domestic dwelling was identified at the wind farm, approximately 100m to the west and cross gradient from the road to turbines T01/T02. Two bored wells and a spring used for drinking water supply are located to the southeast of the substation location. The closest is the spring (W9 on Figure 6-3), which is 220m downgradient of the substation. The development is not expected to have any impact on these wells.
- 8.6.18. Besides from peat instability and failure, other potential impacts during the construction phase include those relating to excavation works, contamination, erosion and health effects. Section 6.5 of the EIAR lists various project design elements to address these potential impacts, including references to the various construction practices, such as work timing (avoid extreme weather conditions), pollution prevention, employment of an ECoW, peat restoration/regeneration areas, sustainable use of excavated materials on site and a host of features outlined within the CEMP, which accompanies the original application. Mitigation measures employed during decommissioning activities will be similar to those used during construction. The site roads will be left in place and used to access the farmland and forestry of the site. The on-site substation is also likely to be left in place and become part of the National grid. Otherwise, it would be removed, and the site restored to agricultural lands. In addition to the above during construction, monitoring will be conducted in areas of deep peat near the construction works and within the peat regeneration areas.

Conclusion

8.6.19. On the basis of the information provided, including detailed site investigations, the assessment of peat stability, the excavations required, as well as the expected volumes of material, I am satisfied that the conclusions reached are robust and that the proposed development would not have adverse impacts on the land, soils and geology of the area. I note that detailed methodologies have been provided for all aspects of construction. In conclusion, I am satisfied that the potential for impacts on soils, geology and hydrogeology can be avoided, managed and/or mitigated by measures that form part of the proposed development, by the proposed mitigation measures and with suitable conditions and therefore that the potential for direct or indirect impacts can be ruled out. I am also satisfied that cumulative effects, in the context of the ongoing commercial forestry and other existing, permitted and proposed development in the vicinity of the site, are not likely to arise.

8.7. Hydrology

- 8.7.1. Chapter 7 of the EIAR examines the potential impact of the development on hydrology. A desk study, field mapping and walkover surveys were undertaken between October 2018 and December 2020 to inform the EIAR. The impacts were also informed by the collection and testing of surface water quality and identification of local users of surface water for drinking water supply.
- 8.7.2. The site is within the Northwestern River Basin Management District and within two hydrometric areas. The eastern side of the wind farm site (T1 to T4) and the access road upgrades are in hydrometric area 01 (Foyle) which is drained by the Stranagoppoge River. The western side of the site (T5 to T8 and the substation) and the grid connection are within hydrometric area 38 (Gweebarra-Sheephaven) which is drained by the Stracashel River and its tributaries. Hydrometric Area No. 01 includes the surface catchment drained by the River Foyle and by all streams entering tidal water between Culmore Point, County Derry and Coolkeeragh, County Derry. This area is in the jurisdiction of the Loughs Agency. Hydrometric Area No. 38 includes the surface catchment drained by all streams entering tidal water in Gweebarra River, Sheephaven Bay and between Rossan Point and Fanad Head, County Donegal. The site is drained by many mountain streams which drain to the

Stracashel and Stranagoppoge rivers. They are generally fast flowing on bedrock and / or cobble beds and the Owenea River catchment is one of six FWPM catchments in County Donegal.

Water Quality

- 8.7.3. Section 7.2.2 states that based on the most recent data from the EPA (from 2018, 2019 and 2020), the water quality in the streams and rivers draining the site has moderate (Q3-4) to good (Q4) status. The River Waterbody WFD Status 2013-2018 for the Stracashel River is 'Good' and for the Stranagoppoge River is 'Moderate'. The Stracashel River is assigned 'Not at Risk', while the Stranagoppoge River is assigned 'At Risk'. Surface water samples were collected on 12 August 2020 which indicated that the streams draining the site are unpolluted.
- 8.7.4. The Graffy site is mainly characterised by blanket peatland which generally has thin peat which has been drained for land improvement, turf cutting and forestry. To a lesser extent, roads have been constructed on the hillside. These man-made drains have altered the natural peatland hydrology at the site and so the site is less sensitive to changes from the wind farm construction than would otherwise be the case. Several of the streams draining the site are used for water supply – mostly for agricultural use.

Flooding

- 8.7.5. According to OPW data there were no reported incidents of flooding at the site itself or immediately downstream of it and the proposed wind farm site (including associated grid connection works) are not within areas identified as being at risk of flooding. The closest flood incidences downstream of the site are at: Glenties with records of reoccurring flooding of the Stracashel River downstream of Glenties and Welshtown with reoccurring flooding of the Finn River downstream of Ballybofey.
- 8.7.6. A Hydrology Impact Assessment was carried out as part of the environmental assessment for the development to estimate the percentage increase in run-off from the site due to the development. Following this assessment, which included a site walkover it was concluded that any increased run-off from the site will be imperceptible, and the development will not take up any flood storage capacity.

Possible Surface Water Impacts

8.7.7. The characteristics of the proposed development that could potentially have an impact on surface water quality and hydrology are listed under Section 7.3 of the EIAR and an Impact Assessment is then carried out under Section 7.4. Potential impacts as a result of Pre-Construction Ground Investigations are outlined under Section 7.4.2, these include possible impacts as a result of HDD. This section states that excavation of trial pits may result in sediment loading, however this would be considered brief and imperceptible on local users of surface water. With regard to HDD, the recirculating water (typically 400L to 500L) presents a risk to water quality of the adjacent watercourse. Unmitigated, release of recirculating drilling water presents a direct localised brief slight negative impact on water quality, and an indirect localised brief imperceptible negative impact on habitats downstream.

8.7.8. Potential impacts of the proposed development during the construction phase are also outlined in Section 7.4.2 of the EIAR and summarised below. Several of these impacts were also highlighted by observers to the appeal.

- Clear felling of coniferous plantations (c. 6.465ha proposed);
- Earthworks resulting in suspended solids entrainment in surface waters;
- Peat landslide risk with peat debris entering the streams and rivers draining the site (see Section 8.6 above for more details in relation to this);
- Release of hydrocarbons;
- Release of cement-based products;
- Increased risk of water pollution while working in proximity to watercourses for works on culverts, grid connection route, HDD and 'frac out' (accidental release of drilling fluid);
- Potential for the culvert to collapse;
- Dewatering and impacts on surface water and possible groundwater quality; and
- Impacts on hydrologically-connected/dependant habitats, species and designated sites downstream.

8.7.9. The applicant states that there would be less potential for direct and indirect impacts on surface water quality during the operational phase of the wind farm. The decommissioning of the wind farm would present similar potential impacts to those

identified during the construction phase. The main potential impact is the pollution of water courses from silt and diesel. A summary of watercourse crossings is provided in Table 7-9. 11 no. crossings in total area proposed with 8 no. being HDPE culvert suitable. Bottomless / clear-span structures are recommended for crossing no.s X1, X5 and X6. Regarding possible cumulative impacts Section 7.4.5 states that the proposed wind farm is spread across two river catchments. There are no developments, existing or proposed, in the vicinity of the site that would result in any significant cumulative impacts.

Mitigation

- 8.7.10. Observers to the appeal raise concerns regarding the impact of the proposed development on water quality, in particular the likelihood of construction related debris and pollution travelling into watercourses and drains which link the turbine locations to the Stracashel and Stranagappoge Rivers and eventually into the River Finn and River Owenea catchment area. In particular, concerns are highlighted about the construction of access tracks to the turbines and also the proximity of turbines T1, T3, T5 and T6 to nearby streams. The link between any deterioration in water quality and impacts on ecology, in particular designated Natura 2000 sites and their qualifying interests and in particular FWPM are also highlighted. I also note the importance of the River Finn and Stranagoppoge River for spawning and nurseries, in particular for anadromous salmon and trout. In addition, to the above concerned observers have also highlighted the significant risk posed by the excavation of large quantities of peat and the possible resultant impacts of sediment escape into water courses. This issue has already been examined and addressed under Section 8.6 above, however the mitigation measures discussed below are also relevant given this subjects relationship with water quality.
- 8.7.11. Comprehensive surface water mitigation is outlined under Section 7.5. Greater detail, including method statements where appropriate, is provided in the CEMP (Appendix 7.4). The CEMP includes details of earthworks (Chapters 5 and 6, and Attachment 6 of the CEMP which contains Method Statements on Road Construction, Peat Management, Horizontal Directional Drilling and Grid Connection Construction Methodology, which provides additional detail on HDD). It also details Emergency Response procedures for environmental incidents.

- 8.7.12. Pre-construction Ground Investigation mitigation includes for minimisation of stream crossings, appropriate machinery (including wide track excavators), appropriate trial pit restoration, for drilling- techniques will be preferentially selected where recirculating water is not required and silt fencing / sandbags / straw bales will be erected between the stream and the drilling location to contain any spillages of silt-laden water. I note that used drilling water will not be released to drains and instead will be removed from site to a wastewater treatment plant.
- 8.7.13. General Construction Phase mitigation includes the appointment of an ECoW for the duration of the construction. Surface water management infrastructure will be the first works carried out and diversion of clean surface water around earthworks areas. Earthworks will be suspended during extreme weather conditions and areas stripped of vegetation will be kept to a minimum. Stockpiled soils will be kept a minimum distance of 50m from any watercourse and silt fences will be placed downgradient of stockpiles to treat any polluted run-off. Drainage swales and check-dams will be installed where required and clay plugs will be used along the length of the proposed cable trenches. In-stream works will be kept to a minimum and will be avoided between 01st October and 30th April as per IFI and Loughs Agency guidelines. The IFI will be consulted for crossings wider than 600mm. In addition to the aforementioned, detailed mitigation measures in relation to fuel storage, refuelling, tree-felling and replanting are also proposed. I note that 6.82ha of replanting will be carried out at a proposed off-site location County Mayo.
- 8.7.14. Specific mitigation in relation to the Grid Connection works are also outlined. Where replacement of existing stone culverts is required, the ECoW will liaise with IFI and National Parks and Wildlife Service (NPWS) prior to works commencing and monitoring of surface water quality downstream of the works will be conducted in accordance with the surface water monitoring programme. Where temporary fluming or flow diversion is proposed in a watercourse with salmon or trout present, all fish within the designated area will be subject to fish rescue and translocation downstream by a fisheries biologist. Fish rescue will be conducted under Section 14 authorisation (DCCA/E/ IFI) or Section 69 authorisation (Loughs Agency) where appropriate. Sandbagging will also be used as part of the mitigation where required.
- 8.7.15. Concerns in relation to possible impacts from HDD drilling were also raised by observers to the appeal. I note that the HDD contractor will provide a site-specific

method statement for this work which is to incorporate the measures detailed in the CEMP, including emergency response plan. The setback distances from the watercourses at the three proposed HDD locations (i.e. the launch and exit pits) will be 50m, 20m and 25m for the Coillte Bridge, public road bridge and triple culvert, respectively. The infrastructure required for the Surface Water Management is outlined in detail under Section 7.5.3 of the EIAR.

- 8.7.16. Site Specific Water and Sediment Management for each turbine is detailed under Section 7.5.4. These include for cut-off trenches/diversion barriers around earthwork areas, settlement ponds and check fences where necessary, silt fences, diversion of a man-made drain for T4 and a collection sump will be installed just east of the T6 location. Similar mitigation will be provided for the substation and construction site compound locations.
- 8.7.17. Separate arrangements have been outlined for stream crossings. The main locations are shown on Figure 7-2 and Table 7-9. Crossings and culverts will be installed during low flow conditions and works will be restricted to between May and September for crossing X2 (T1), and preferably all crossings will be installed during this period. General surface water management controls are outlined which include specific measures for the installation of the clear span structures.
- 8.7.18. The worse-case scenario as outlined in the EIAR would be if there was a release of silt-laden water or peat landslide into the streams draining the site during construction. As detailed in Chapter 6 of the EIAR, Section 6.4.4 and 6.6.1, the overall conclusion is that a peat landslide occurring is unlikely and the indicative risk level is negligible, however in the event that this does occur an emergency response will be implemented. The full emergency response procedure will form part of the Site-Specific Health & Safety Plan and is included in Chapter 8 of the CEMP. Monitoring of the site will also be implemented. This will include weekly inspections at all outfalls from the construction works including monitoring of water chemistry at the agreed monitoring points in the streams and rivers draining the site (see Figure 7-2 or Figure 5-1 of the CEMP). Table 7-10 summarises the proposed monitoring regime, which include automated monitoring of surface water quality prior to, during and post construction. The system will have the ability to notify the ECoW if turbidity exceeds 75% of the emission limit value. Automated turbidity monitors will also be installed at four key locations on the streams draining the site. In addition to the

above, water quality will be monitored upstream and downstream of each stream crossing along the grid route. It is not clear from Table 7-10 (or Table 5-3 of the CEMP) what monitoring will occur post construction, however I am satisfied that these details can be provided by way of condition.

Conclusion

8.7.19. I am satisfied that the appellant has shown reasonable knowledge of the existing drainage regime for the area and that the EIAR conclusions regarding surface water and groundwater are reasonable. The most significant potential impacts would be likely to occur during the construction phase. I am satisfied, overall, that the development would not have a significant adverse impact on water quality subject to conditions and the proper implementation of the proposed project design features, including drainage proposals and the measures outlined in the CEMP, which includes an Ecological Management Plan, Watercourse Crossing Methodologies, Surface Water Quality Monitoring Plan and details of Maintenance of Site Drainage Systems. The measures proposed are comprehensive and are described as pre-emptive and proactive, with ongoing inspection, water-quality monitoring and maintenance.

8.7.20. I have considered all of the written submissions made in relation to water quality and hydrology and the relevant contents of the file including the EIAR. I am satisfied that the potential for impacts on water quality and hydrology can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, by the proposed mitigation measures and with suitable conditions. I am therefore satisfied that the potential for direct or indirect impacts on water quality and hydrology can be ruled out. I am also satisfied that cumulative effects, in the context of existing and permitted development in the surrounding area, are not likely to arise.

8.8. Air Quality and Climate

8.8.1. Chapter 8 of the EIAR details the Air Quality and Climate assessment that was carried out for the proposed windfarm.

Air Quality

8.8.2. The Air Framework Directive deals with each EU member state in terms of "Zones" and "Agglomerations". These air quality zones have been declared for air quality

management and assessment purposes. As part of the EU Framework Directive on Air Quality (1996/62/EC), four air quality zones have been defined for Ireland. Glenties is in Zone D which is comprised of rural Ireland outside the specified conurbations and large towns. As part of the assessment typical air quality monitoring data representative of Zone D monitoring sites was examined and outlined under Table 2 of Chapter 8. The report notes that the proposed site is a rural location, with no obvious industrial sources within 2km and in summary, existing baseline levels of NO₂, PM₁₀ and PM_{2.5} in the vicinity based on extensive long-term data from the EPA are well below ambient air quality limit values.

- 8.8.3. Any adverse impacts on air quality are predicted to occur during the construction phase, with the dominant sources of greenhouse gas emissions as a result of construction traffic and dust from construction activity and movement of materials. Regarding exhaust emissions, I am satisfied that any impact on air quality as a result of same would be short-term and would not be of significance in either the construction or operational phases.
- 8.8.4. The report states that a dust minimisation plan is to be followed for the construction phase of the project, as construction activities are likely to generate some dust emissions, particularly during the construction of the grid connection. The majority of any dust produced will be deposited close to the potential source and any impacts from dust deposition will typically be within several hundred metres of the construction area. I note that Section 8.6 Conclusion refers to the 'Sheskin Windfarm' which would appear to be a typo. Having carried out an examination of the submitted information however I am satisfied that the assessment is relevant to the subject site at Graffy and the information submitted is accurate for that site.
- 8.8.5. Due to the rural location of the Graffy Wind Park, there are very few sensitive receptors within 1 km of the site boundary, reducing the potential for impacts greatly. The potential for dust will be limited by the dust mitigation plan resulting in a temporary impact that is classed as negligible. Having reviewed the foregoing, given the inherent temporary duration and impact of the proposed construction works, coupled with design elements to ensure best practice site management and dust minimisation, I am satisfied that the construction of the proposed development would not result in any significant impact on air quality in the surrounding area.

Climate

- 8.8.6. The applicant states that the generation of 100 GWh of electricity to the national grid during the operational phase will lead to a net saving for the development in terms of greenhouse gas emissions. The production of wind power for export to the national grid transforms the proposed cumulative impacts from negative in terms of GHGs to having a net positive annual impact on GHG emissions of the order of 0.139% of the Total Greenhouse Gas Emissions in Ireland in 2016.
- 8.8.7. The generation of electricity due to the installation of the wind farm will lead to a net savings in terms of NO_x emissions. Results, outlined in Table 3, indicate that the impact of the wind farm on Ireland's obligations under the Gothenburg Protocol and the EU 20-20-20 Targets are positive. The annual impact of the development is to decrease annual NO_x emission levels by 0.07% of the ceiling levels (relative to the NO_x emissions associated with power generation in Ireland 2015). In terms of the lifetime of the wind farm, the total NO emission savings will amount to over 1,056 tonnes of NO_x which is equivalent to 6.56% of the total NO_x emissions from power generation in 2015.
- 8.8.8. Section 8.4.12 of the EIAR states that a life cycle assessment was carried out which quantifies the associated power consumption associated with the production, operation, transport and end-of-life of the wind turbines. Using the data contained in the life cycle assessments, a site-specific assessment of the energy balance for the current project was undertaken which shows that the total Energy Consumed / 8 Turbines Life Cycle = 29,088 MWh and when this is expressed in Energy balance terms over a period of 25 years this would amount to 3.5 months. However, I note the period for which the Graffy windfarm is proposed is 30 years, therefore the Energy balance would in fact be 2.9 months.
- 8.8.9. Vehicular traffic would be expected to be the dominant source of greenhouse gas emissions as a result of the development. Vehicles will give rise to CO₂ and NO₂ emissions near the proposed development. There will be no greenhouse gas emissions from the operation of the wind turbines. However, due to the displacement of 100 GWh of electricity which otherwise would have been produced from fossil fuels, there will be a net benefit in terms of greenhouse gas emissions. The production of wind power for export to the national grid transforms the site from

negative in terms of GHGs to having a net positive annual impact on GHG emissions of the order of 0.146% of the annual Total Greenhouse Gas Emissions in Ireland in 2016. In terms of the lifetime of the wind farm, the total GHG emission savings will amount to over 1,600,644 tonnes of CO₂eq which is equivalent to 12.7% of the total predicted annual GHG emissions from the energy sector in 2020.

- 8.8.10. The decommissioning phase will involve the removal of the turbines and associated site infrastructure e.g. met mast. In a similar way to the construction phase, this will have a short-term negative impact on the local air quality. However, due to the short-term nature of any associated works and low background concentrations in the vicinity of the site it is predicted to have an imperceptible impact on local air quality.
- 8.8.11. Chapter 1 of the EIAR states that the development will have carbon losses associated with turbine manufacture, transport, use of concrete in its construction and carbon losses from excavated peat and soil. Carbon gains are associated with the generation of electricity from a renewable source. The carbon payback for wind farms is cited at timescales of 3 to 5 months on the IWEA website⁹. Chapter 6 of the EIAR states that Carbon balance is addressed in Chapter 8 (Climate) although it would appear that the topics of negative impacts on carbon sequestration and deforestation on site have not been addressed. However, I do note that the EIAR has addressed these issues in detail at other stages. Chapter 6 details that in total 48,048m³ of peat spoil will be generated during the construction phase, however, this peat will be reused to restore and landscape along site roads and around slopes of hardstands on an on-going basis. Excess peat will be taken to peat regeneration areas, which have previously been discussed under Section 8.5.10 above. In total 34,308m³ will be used in peat regeneration areas where the upper layer of peat excavated will be placed on top to facilitate re-vegetation and regeneration of the peat. Similar to the aforementioned, though this Chapter does not mention the loss of commercial forestry on site due to development, I do note that the applicant proposes replacement forestry plantation off site (6.82ha proposed on a site at Sonvolaun, Co. Mayo which has afforestation licence approval) which they states will directly offset the loss of commercial forestry required to facilitate the development.

⁹ <http://www.iwea.com/index.cfm/page/environmentalimpacts?q63>

The growth of trees in the replantation area, would allow for fixation of atmospheric carbon.

- 8.8.12. I have considered all of the written submissions made in relation to air and climate and I am satisfied that the impacts identified would be avoided, managed and/or mitigated by the project design features, which form part of the proposed development, the proposed mitigation measures and through suitable conditions. The proposed development would have a significant positive impact in terms of renewable energy production and reductions in greenhouse gas emissions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of air and climate. I am also satisfied that cumulative effects are not likely to arise and that approval for the project should not be withheld for grounds relating to air and climate.
- 8.8.13. As part of Chapter 10 part (iv) a 'Do Nothing' Impact assessment was carried out which considered the potential impacts for Climate Change. If the proposed wind energy development, its associated works and infrastructure does not proceed, it is assumed that the character of the landscape and its uses will remain much as they are today i.e. rough grazing, peat extraction and commercial forestry growth.
- 8.8.14. If the proposed development does not proceed, the projected generation of electricity from a renewable source will not take place and therefore a net reduction in greenhouse gas emissions will not occur. It follows therefore, that there will be no contribution to the slowing or reversal of climate change. It is therefore possible that part of the cumulative 'Do Nothing' impact for this and other renewable energy developments will accelerate the loss of salmon and other aquatic species from their range of distribution in Ireland as a whole.

Conclusion

- 8.8.15. I have considered all of the written submissions made in relation to air and climate and I am satisfied that the impacts identified would be avoided, managed and/or mitigated by the project design features, which form part of the proposed development, the proposed mitigation measures and through suitable conditions. The proposed development, would have a significant positive impact in terms of renewable energy production and reductions in greenhouse gas emissions and amendments to the proposed development. I am, therefore, satisfied that the

proposed development would not have any unacceptable direct or indirect impacts in terms of air and climate. I am also satisfied that cumulative effects are not likely to arise and that approval for the project should not be withheld for grounds relating to air and climate.

8.9. Cultural Heritage

- 8.9.1. Chapter 9 of the EIAR addresses archaeology and cultural heritage. It is stated that field inspections of the proposed development area, as well as a desk review, namely a paper and digital survey of archaeological, historical and cartographic sources were carried out. Site visits took place on 24th April 2019, 26th February 2020 and 2nd December 2020 where areas of proposed land take associated with the 8 no. turbines, substation, meteorological mast and grid connection areas were walked and visually assessed. The proposed grid connection along the line of a public road was assessed by means of a detailed windshield survey.
- 8.9.2. Section 9.4 outlines the archaeological and historical background to the area, as well as detailing any sites and monuments on the Recorded Monuments and Places (RMP) within the vicinity of the site. In total 11 RMP were recorded within the 5km study area, these sites are illustrated on Figures 9.5 and 9.6 of this chapter and are summarised in the table below:

Table 8.9.1 – Summary of RMP within the vicinity of the site

RMP Ref:	Type	Distance from site
RMP DG066:002	Unclassified megalithic tomb	c. 2.7km north of Turbine 1 in An Cró Cam townland
RMP DG066:004	Megalithic structure	c. 3.2km north of Turbine 1 in An Curraoin townland
RMP DG075:003	Ring-barrow	c. 3.4km south west of Turbine 8 in the townland of Corr na nGriollach
RMP DG075:002	Structure - upright slab	c. 3.3km south west of Turbine 8 in An Mhullaigh townland.
RMP DG075:001	Ringfort	c. 3.9m south west of Turbine 8 and approximately 0.6km south of the grid connection on the boundary

		between An tArd Donn and Droim Chon Cuais townlands
RMP DG075:005	Ringfort	c. 2.4m south west of Turbine 8 in An tSeanga Mheáin townland
RMP DG075:004001 RMP DG075:004003 RMP DG075:004002	“Killeen Burial Ground” consisting of: Oval mound Cross-slab	c. 3.3km south west of Turbine 8 in Lag na Gaileadh townland
RMP DG066:001	Burial ground	c. 4.6km north east of Turbine 1 in Baile na Finne townland
RMP DG066:003	Mound	c. 2.9km north west of Turbine 2 in An Curraoin townland.

8.9.3. Section 9.4.2 of the chapter provides a Cartographic Analysis and outlines that several structures were noted within the vicinity of proposed turbines on the site, however following site walkovers none were determined to have any archaeological significance. Aerial photography was also examined, and the assessment concluded that there was no evidence of any archaeological or architectural features of note within the proposed development area. An assessment of Topographical Files of the National Museum of Ireland was also conducted which showed that a wooden pole and two wooden beams were previously discovered in the Graffy townland however the coordinates noted for their discovery place as a find spot in Stralinchy townland (which is the townland located immediately west of Graffy townland and outside the proposed development area). As a result, it was not possible to be precise as to which townland they were discovered in.

8.9.4. There are no National Monuments in State care within the proposed site or within 1km of the proposed site, nor are there any National Monuments with Preservation Orders or Temporary Preservation Orders. In addition, there are no World Heritage Sites or sites included in the Tentative List within 5 km of the site. Regarding Protected Structures, Architectural Conservation Areas (ACAs), proposed ACAs or

Heritage Towns as identified under the Donegal County Development Plan 2018-2024, none are recorded within the vicinity of the proposed site. An examination of the National Inventory of Archaeological Heritage also showed no structures of note within 5km of the site.

- 8.9.5. The assessment states that the underground grid connection will largely be laid along a local public and private road, occasional houses and modern forestry noted either side of the public road. The western end of the proposed grid connection will be laid on private land, and the walkover survey noted an existing 4m to 5m wide compacted access road with conifer plantations either side. No archaeological, architectural or cultural heritage features were revealed within the proposed grid connection as a result of carrying out the windshield survey and walkover survey.
- 8.9.6. Section 9.5 of the report contains an assessment of likely effects and states that elements of the proposed development with the potential to impact on archaeological, architectural or cultural heritage remains are construction of the turbine bases and hardstand areas, access roads, grid connection, substation, meteorological mast, road widening and associated activities. Given that no monuments are recorded on the proposed site the assessment has determined that no direct or indirect construction phase effect on the recorded archaeological resource.
- 8.9.7. It is considered there will be at worst a residual long-term reversible imperceptible visual effect on the 11 Recorded Monuments located within the proposed wind park and substation 5km study area, but there will be no residual effect on the architectural or cultural heritage resource. Proposed archaeological monitoring of all groundworks associated with construction of the wind park, substation and grid connection are proposed. It is considered there will be no decommissioning phase and no cumulative construction or operational phase effects on the archaeological, architectural or cultural heritage resource.
- 8.9.8. I note the DHLG&H in their consultation response require archaeological monitoring, including the identification of the best means of recording archaeology should any materials be found. In addition, a suitably qualified archaeologist will be required to monitor all topsoil stripping associated with the development.

Conclusion

8.9.9. I have considered all of the written submissions made in relation to archaeology and cultural heritage and the relevant contents of the file, including the EIAR. I am satisfied that the potential for impacts on archaeology and cultural heritage can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, by the proposed mitigation measures and with suitable conditions. I am therefore satisfied that the potential for direct or indirect impacts on archaeology and cultural heritage can be ruled out. I am also satisfied that cumulative effects, in the context of existing and proposed development in the vicinity of the site, are not likely to arise.

8.10. **Material Assets**

8.10.1. Chapters 11 and 12 examines the likely significant effects of the project on Roads and Traffic and Material Assets. I also consider issues regarding electromagnetic effects under this heading which is detailed under Chapter 13 of the EIAR.

Roads and Traffic

8.10.2. Direct access to the site will be provided by the existing local roads network to both the east and west, which are currently used only by local traffic and therefore experiences very low usage. Service access to the site will be off the R252 at Ballinamore and along local roads L2023, L6733 and L6743. All construction equipment will be delivered to the site via this route in addition to the import of quarry materials and disposal of unsuitable material as necessary. This route will require some localised upgrades to accommodate deliveries of some turbine elements with some temporary widening also required along the delivery route.

8.10.3. Before the transportation of the turbines from the port of entry at Killybegs to the wind park site and installation on site, a range of advanced enabling works will be required – namely construction of site roads, installation of assembly platforms, laying of fibre optic/electrical cables and pouring of turbine foundations. The Turbine delivery route is illustrated on Figure 11.1. The proposed delivery route from Killybegs will travel firstly via the regional road R263 and national road N56 to Donegal town and then follow the N15 north to the Roadhouse junction with local road L-2794-1, approximately 3kms west of Ballybofey, after this it travels along the L-2794-1 to its junction with the R252, then west from here taking the he L-2023-1 to

its “T” junction with the L-6733-1, then travelling along this route to its junction with the L-6743-2 where it will then travel southwest on L-6743-2 to the site. There are particular locations along the route where the alignment may offer a confined delivery corridor when transporting the largest element – the turbine blade. Vehicle swept path analyses will be required to confirm that passage is achievable for these particular elements which have been identified as 1. Horizontal alignment approximately 550m south of Bruckless Bridge; 2. Junction at Roadhouse Bar 3. Junction at Cappry (intersection of R252 & L2794) 4. Junction at Bellanmore (intersection of R252 & L2023) and 5. Proposed horizontal realignment through Coillte lands. Drawings 19-014-SPA-001 to 19-014-SPA-005 enclosed in in Appendix 11 of Volume 3A - Appendices of the EIAR, show vehicle swept path analyses for each of the junction listed above and show what specific measures are required to facilitate passage through these constrained locations. Bridges and culverts along the national and regional road network and along the route are considered sufficiently robust to facilitate the weight of turbine deliveries.

- 8.10.4. Section 11.3.1 states that there is approximately 4.5km of newly constructed site roads required to link the existing road network to each of the 8 individual turbine sites. This will involve excavation/deposition of material to sub-formation level before importing suitable material to create site road.
- 8.10.5. It is not anticipated that any sections of the local road network will be closed during turbine deliveries and that all of the deliveries comprising out-sized loads will be made outside the normal peak traffic periods, mostly likely at night, to avoid disruption to work and school related traffic. The potential impacts on traffic and roads associated with the proposed development during the construction phase includes: Increase in local daily traffic in particular an increase in standard four axle lorries carrying concrete and stone, Delivery of the cranes to the site – approximately 25 for the 2 cranes, Modification of road junctions and development of a new section of road, to accommodate easement sweeps at corners and the grid connection works required along roadways.
- 8.10.6. To mitigate against the impacts of traffic associated with the project and prior to the commencement of construction, a Traffic Management Plan will be agreed with DCC, for a delivery route for concrete and stone, a delivery route of the over-sized loads for the turbines, speed limits for HGVs on local roads to and from the site,

provision of traffic control while transporting oversized loads and deliveries of AIL (Abnormal Invisible Loads) during off peak hours. Mitigation measures are also to be employed during the construction of the grid connection which will provide for a prior-to-construction Traffic Management Plan agreed with DCC with a programme for road works and route for delivery of construction material, traffic diversions to minimise conflicts with construction traffic and speed limits for HGVs on local roads. Adherence to normal good construction codes of practice would also be a prerequisite, including the various measures outlined as part of the project within the EIAR submitted and the accompanying documentation

- 8.10.7. As part of the appeal the applicant notes the advice appended to the Council's Notification of Decision in relation to the installation of HV cables in the local road network. While they acknowledged that this issue it is not a matter for the appeal process, the appellant wishes to advise the Board that in discussions with the DCC Senior Road Engineer it was confirmed that the Roads Authority would allow cables in the local road if the operator has a Section 48 licence consent from the CRU. Observers to the appeal have also raised this consent process as a concern. However, I note that the matter of achieving consent under Section 48 of the Electricity Regulations Act 1999 will be evaluated under a separate legal code and thus need not concern the Board for the purposes of this appeal.
- 8.10.8. No significant cumulative impact is envisaged on the local road network. There may be some overlap in concrete and stone deliveries to both sites along the R252, however, the regional road network is designed to accommodate these levels of traffic. The location has the advantage of alternative access to Glenties, Letterkenny and Ballybofey by local traffic via the R252 and R253, which considerably reduces the disruption by road closures to local traffic.
- 8.10.9. Having regard to the above, I am satisfied that the proposed development would not give rise to a traffic hazard or endanger the safety of other road users, subject to the full implementation of the design elements outlined within the EIAR and compliance with planning conditions. The proposed development would not give rise to any significant adverse cumulative traffic impacts in-combination with other windfarms, the grid connection route, or plans and projects in the area.

Material Assets

- 8.10.10. Chapter 12 highlights that many of the aspects of material assets have already been addressed in other chapters of the EIAR, including those in relation to Culture and Heritage, Geological Heritage, Landscape, and Roads and Traffic. Other material assets associated with the site and its environs include wind energy resources, electricity resource, forestry resource agricultural resource and industrial minerals and rocks are therefore focused on in more detail under this chapter.
- 8.10.11. In relation to electricity resource Section 12.1.2 states that the Graffy Wind Farm which has a capacity of 35.88 MW has applied for and been included in the RESS-1 auction and having local embedded generation capacity is a benefit to the electricity transmission and distribution networks, given that there are less losses associated with local embedded generation as the power generated is largely consumed locally. When considering forestry resource while the applicant acknowledges that there is commercial forestry adjacent to the site, forestry resources will only be minimally affected by keyhole felling, which will be required at a new access route adjacent to local road L-6733 to the northeast of the wind farm, at easement of bends along the delivery route, for bat impact mitigation around T1, T4, T5 and T6 and at turbine tracks to T1 and between T4 and T5/T6. Felling of approximately 6.656 ha of forestry in total will be required but as discussed, any loss of trees is to be mitigated by replacement planting.
- 8.10.12. In relation to loss off agricultural lands, the land use in the area is primarily rough grazing for sheep and in addition there is evidence of small-scale historic turf cutting at the site, with active turf cutting occurring in the general area particularly at the low-lying elevations. No significant negative impacts are expected on agricultural resources as a result of the proposal. In addition, it is highlighted that there are no active quarries, pits or mines in the vicinity of the site and rock excavation on the site is expected to be low.
- 8.10.13. From a positive viewpoint, in addition to reducing harmful atmospheric emissions, wind energy is an indigenous, secure and sustainable resource in contrast to fossil fuels, which are ultimately unsustainable. The EIAR states that the wind park will make effective use of an exposed site, which has a low usage intensity, and the local climatic conditions are very suitable for such development.

The local wind resource can be considered a material asset, which will now be utilised. Finally, Section 12.2.1 states that the development of wind energy projects in rural areas provides an increased income for landowners, as the utilisation of their land can be diversified.

8.10.14. A potential negative impact relates to tourism. The area in which the wind park is proposed, is designated as an area of High Scenic Amenity in the Donegal CDP 2018-24. Concerns in relation to the impact on tourism have previously been addressed under Section 8.4 of this report above and section 12.2.2 of the EIAR highlights that to date there has been no evidence to suggest that the limited tourism in an area may be negatively affected by the presence of a wind energy facility. The proposed grid connection route from the substation at Meenagrubby to Tievebrack Eirgrid station is approximately 7.5km long and will have a temporary negative impact on the local road network, with some short-term traffic disruptions expected.

8.10.15. Given that no significant negative impacts are predicted on Material Assets no mitigation measures are proposed.

Electro-magnetic Transmissions

8.10.16. Chapter 13 of the EIAR examines the impacts of electromagnetics on communication systems in the existing environment. This chapter states that the rotating blades of a wind turbine may occasionally cause interference to electro-magnetically-propagated signals, therefore an assessment of the impacts of the Graffy Wind Park on local telecommunication systems has been carried out. Section 12.1.3 states that wind turbines are required to be tested prior to sale, which ensures that it meets the required European standard with regard to level of emissions (EN 55011) and immunity to interference (EN 61000). Accordingly, electromagnetic interference is not expected to be a problem.

8.10.17. A number of communication providers were consulted to determine whether the proposed wind park would impact on their signals. The providers who responded raised no objection to the project. Tetra Ireland, an operator appointed by the Irish Government in 2006 to build and operate a National Digital Radio Service (NDRS) who provides a telecommunications service to the An Garda Siochana, Irish Coast Guard, Mountain Rescue, Air Corps etc. responded with no objection. RTE and the IAA had a similar response, the remaining operators did not respond.

8.10.18. No cumulative impacts are envisaged between the proposed wind park and the operational and proposed wind parks within 15kms nor are there any cumulative impacts envisaged between the wind park and the grid connection to Tievebrack substation. No mitigation measures are required in relation to electro-magnetic radiation from the turbines, as levels are negligible.

Conclusion

8.10.19. I have considered all of the written submissions made in relation to material assets. I am satisfied that the potential for impacts on material assets, including traffic and transport and electro-magnetic transmissions can be avoided, managed and/or mitigated where necessary by measures that form part of the proposed scheme, by the proposed mitigation measures and with suitable conditions. I am therefore satisfied that the potential for direct or indirect impacts on material assets can be ruled out. I am also satisfied that cumulative effects, in the context of existing wind energy development in the surrounding area and other existing, permitted and proposed development in the vicinity of the site, are not likely to arise.

8.11. Transboundary Effects

8.11.1. The location of the proposed development to the international boundary between the Republic of Ireland and Northern Ireland, and the hydrological connection via the River Finn, indicates the potential for trans-frontier impacts. The project is hydrologically linked to both the Foyle and Tributaries SAC and the Lough Foyle SPA in the Republic of Ireland. However, the residual impact after the implementation of the mitigation measures (outlined above and under Section 9 below) is assessed as negligible and therefore there will be no potential for significant transboundary effects on water quality as a result of the Proposed Development.

8.12. Interaction between the Factors and Cumulative Impacts

8.12.1. I have considered the interrelationships between factors and whether these may as a whole affect the environment, even though the effects may be acceptable when considered on an individual basis. Table 14-1 of the EIAR summarises the

interactions for both the construction phase and operational phase of the wind farm extension.

8.12.2. The most dynamic interactions listed pertain to population and human beings and interactions between landscape, noise, traffic, hydrology and electromagnetic interference. Similarly dynamic interactions between biodiversity, including noise, traffic, hydrology and birds are also anticipated. Interactions between soils and geology and hydrology and biodiversity are also identified. Interactions between climate change, traffic and soils and geology are also evident, and between landscape and visual impacts and cultural heritage.

8.12.3. All of the aforementioned have been assessed above and I am of the view that the interactions identified are unlikely to cause or exacerbate any potentially significant environmental impacts. Where significant concern have been raised under each of the topics these have been elaborated on under the EIA in the preceding sections above.

8.13. Reasoned Conclusion on the Significant Effects

8.13.1. Having regard to the examination of environmental information contained above, and in particular to the EIAR and supplementary information provided by the developer, and the submission from the planning authority, prescribed bodies, and observers in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- Potential impacts arising on population and human health as a result of noise and shadow flicker to residential property in the vicinity, which would be encountered during the construction and operational phase and would be mitigated by the implementation of the measures set out in the EIAR and the CEMP which include specific provisions relating to the control of dust, noise and shadow flicker.
- 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 and obtrusive impact on visually and environmentally sensitive landscapes, and would impact on the amenity of the area and designated landscape. The incongruity with the

natural landscape and adverse visual impact would not be mitigated by design, the separation from settlements or its setting on the downward side of the slope of Aghla Mountain or its partial setting of certain turbines within commercial forestry. In addition, it should be noted that the comparisons used as part of the LVIA between the proposed development and the previously permitted but now expired permission (ABP PL05B.237656) was not considered useful for the purposes of this assessment.

- Potential impacts arising on lands, soil and geology, as a result of the increased risk of peat instability and peat erosion during the construction and operational phases which would be mitigated by the implementation of measures set out in the EIAR, Peat Stability Plan and the CEMP which include specific provisions relating to peat and spoil management, including monitoring.
- Potential impacts on water quality, hydrology, hydrogeology and associated aquatic ecology, in particular FWPM and Atlantic salmon as well as other fish species and additionally on water dependant species such as otter arising from the potential indirect effects caused by increased run-off, such as soil erosion and sediment release into the receiving watercourses, which would be mitigated by project design features, including attenuation measures and management of any in-stream works, and the measures outlined in the CEMP, including Ecological Management Plan, HDD methodology, Watercourse Crossing Methodologies, Surface Water Quality Monitoring Plan and an outline Site Drainage Management Plan;
- Potential positive impacts on air and climate during the operational phase arising from the connection of renewable energy technology and transfer to the national grid, thereby facilitating a transition from fossil-fuel dependent energy sources to renewable sources;
- Potential negative impacts on the public road network due to the increase in vehicle movements and resulting traffic during the construction phase which would be mitigated by upgraded site access and the preparation of a Construction Traffic Management Plan.

- Development of wind turbines at the height, scale and siting proposed would likely pose a significant risk of collision for the Annex I bird species White-tailed Eagles and Golden Eagle, as well as loss of habitat and displacement for raptors prevalent at this location. Furthermore, the proposed development, would substantially erode the quality of the environment for these sensitive bird species, including the erosion of habitat, encroachment of foraging areas, and effect on roosting and breeding sites.
- Potential impacts during the construction phase for foraging/breeding Merlin and significant uncertainty in the information submitted to allow a determination that there would be a 'Low' magnitude of effect during construction on this species of 'Very High' Nature Conservation Importance. The proposal during construction, operational and decommissioning phases would reduce the attractiveness of the area for Merlin and in turn may cause displacement of species, substantially eroding the quality of the environment for these sensitive bird species and affecting roosting and breeding sites. The proposed development would therefore fail to ensure the continued presence and reproduction of Merlin in their current area of distribution in this area of County Donegal.
- The impact on cultural heritage would be mitigated by archaeological monitoring with provision made for resolution of any archaeological features or deposits that may be identified.
- Positive environmental impacts would arise during the operational phase from the generation of renewable energy.

9.0 Appropriate Assessment

Appropriate Assessment – Screening

9.1. Compliance with Article 6(3) of the Habitats Directive

- 9.1.1. The requirements of Article 6(3) as related to Appropriate Assessment of a project under Part XAB, Section 177U and 177V of the Planning & Development Act, 2000 (as amended) are considered fully in this section.
- 9.1.2. The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of any European site before consent can be given.
- 9.1.3. The applicant has submitted a Natura Impact Statement (NIS) as part of the planning application prepared by RPS, dated 17th September 2021. The applicant's Stage 1 AA Screening Report outlined within Section 5 of the document was prepared in line with current best practice guidance and provides a description of the proposed development and identifies European Sites within a possible zone of influence (ZOI) of the development. The applicant's AA Screening Report concluded that *'the proposed development 'Screens in' to the requirement for AA'*. The following findings in relation to specific Natura 2000 sites are highlighted *'In the absence of further information or the application of mitigation measures, the potential for LSEs arising through water quality and habitat deterioration to the West of Ardara/Maas Road SAC, River Finn SAC and the River Foyle and Tributaries SAC cannot be ruled out'* and *'In the absence of further information or the application of mitigation measures, the potential for LSEs to the Lough Nillan Bog SPA and Derryveagh and Glendowan Mountains SPA arising through indirect effects associated with aerial noise and visual disturbance to merlin cannot be ruled out at the screening stage'*.

9.1.4. Having reviewed the documents and submissions received from interested parties, I am satisfied that the information allows for a complete examination and identification of any potential significant effects of the development, alone, or in combination with other plans and projects on European sites.

9.2. **Screening for Appropriate Assessment- Test of likely significant effects**

9.2.1. The project is not directly connected with or necessary to the management of a European Site and therefore it needs to be determined if the development is likely to have significant effects on a European site(s).

9.2.2. The proposed development is examined in relation to any possible interaction with European sites designated Special Conservation Areas (SAC) and Special Protection Areas (SPA) to assess whether it may give rise to significant effects on any European Site.

9.3. **Brief Description of the Development**

9.3.1. The applicant provides a description of the project in Section 3.2 of the Screening Report. The development is also described in detail in the EIAR (Chapter 2) and summarised in Section 3 of this report.

9.3.2. The development site and existing environment including any habitats and species recorded on site are described in Section 4 of the NIS. Lands within the immediate locality of the proposed development are comprised of areas of upland habitat including wet heath, upland blanket bog and lowland raised bog, in addition to wet and dry grasslands, coniferous plantation and upland streams. Desk studies, in addition to project survey findings indicate that a number of QI mobile species have been recorded or are present within 10 km of the proposed development site. These include otter, salmon, marsh fritillary and FWPM. The desk study returned records for a range of SCI bird species from the preceding 10 years, within 5 km of the proposed development. The site has been subject to bird surveys (carried out by Woodrow Sustainable Solutions) in respect of breeding birds, in the periods March to August 2019 and March to August 2020 and wintering birds in the periods October to March 2018/19 and October to March 2019/20. Over the course of the ornithological study a total of 71 bird species were recorded, including seven species listed on

Annex 1 of the Birds Directive, 13 Red listed species listed, 21 Amber listed species (as per BoCCI 2014-2019). A limited updated survey was undertaken in 2021 (17th May 2021) in respect of the previously recorded Merlin nesting locations only. This survey determined that both previously occupied nest locations were no longer in use, no further site surveys were conducted after this.

- 9.3.3. Given the fact that the finalised turbine type has not been chosen to date (i.e. Enercon 126 and Nordex 133) the impact of the proposed wind turbines has been assessed using maximum dimensions for the rotor swept area which is 18 to 150m i.e. presenting the worst case scenario for avian collision risk.

9.4. Submissions and Observations

- 9.4.1. Submissions received from third parties, the Local Authority and Prescribed Bodies are summarised in Section 7 of this Report. Matters raised that are considered to be relevant in the context of Appropriate Assessment are summarised below:

- Insufficient evidence submitted to prove beyond scientific doubt that this development will have no adverse impact on the adjacent Natura 2000 sites and species.
- Potential impacts to Merlin populations, a qualifying interest (QI) for Lough Nillian Bog Special Protection Area (SPA) (site code 004110) and Derryveagh and Glendowan Mountains SPA (site code 004039). The Department of Housing, Local Government and Heritage (DHLGH, hereon referred to as the Department) considers the NIS to be deficient as it does not contain a robust scientific assessment (i.e. confidence levels) of whether the Merlin pair recorded in 2019 and 2020 within 6km of the Lough Nillan SPA form part of, or support the Special Conservation Interest (SCI) population (N=5 pairs) for that European site. Moreover, there is no assessment of what effect displacement of a breeding pair would have on the integrity of the Merlin populations for the two European sites concerned.
- Concerns regarding the collision risk modelling (CRM) undertaken - 3D modelling should have been applied to get more accurate results.

- With regard to FWPM: Lengths of the Stracashel River and Owenea River support populations of freshwater pearl mussel, a QI of the West of Ardara/Maas Road SAC, located downstream from the proposed development. The Department considers that the NIS contains inadequate details with regard to 1. Distance of drill launch and receiver pits from watercourses and associated mitigation. 2. Frac-Out plan, response actions and assessment of associated environmental risks and impacts. There are also doubts regarding adequacy of mitigation measures in relation to FWPM.
- Risk of potential bogslides/peat slides and resultant impact on water quality of Stracashel & Stranagappoge Rivers and eventually into the Finn and Owenea catchment area - West of Ardara/Maas road SAC (000197) and the River Finn SAC (002301). The Stranagappoge River, Stracashel River, River Finn and Owenea River support salmon, and these watercourses, which form a part of the West of Ardara/Maas Road SAC or River Finn SAC are considered to be highly sensitive to potential impacts arising from the proposed development

9.5. European Sites

9.5.1. Section 5 of the submitted report states that the proposed development is screened against European sites in order to appraise whether, firstly, the project is directly connected with or necessary to the management of the European sites and, secondly, whether it is likely to have a significant effect on any European site. The possibility of significant effects is considered using the source-pathway-receptor model. Section 5.2 states that possible effects are discussed under four themes (note: typo given that there are in fact 5 themes) as follows:

- Habitat loss
- Water quality and habitat deterioration
- Aerial noise and visual disturbance
- Collision risk
- Barrier effects

9.5.2. There are 11 SAC's and 4 SPA's within a 15km radius of the site. These site's are shown in Figure 4-1 which follows the main NIS written report. The vast majority of

the proposed site, including all of the proposed turbine locations, lies outside of any European site. The proposed development will however involve works within the boundary of both the West of Ardara/Maas Road SAC and the River Finn SAC. The West of Ardara/Maas Road SAC lies within the redline boundary of the proposed development within the grid connection route section, which will cross the SAC at the Stracashel River via an existing private access road which services the Tievebrack Eirgrid Station. This underground cable grid connection will be installed using HDD method and as such will not give rise to any loss of habitat within the West of Ardara/Maas Road SAC.

- 9.5.3. The River Finn SAC lies within the redline boundary of the proposed development within a short section of the local road L-6743-2 between the T1 and T2 access and associated cabling in addition to a short section of the proposed new road within Coillte commercial forestry lands, to the east of the L-6743-2. Works within these areas will include the movement of construction traffic, the laying of cabling within the roadbed and the construction of a new road which will utilise an existing bridge structure. The proposed development will therefore not give rise to the loss of any areas of watercourse, or semi-natural habitat which form a part of the River Finn SAC.
- 9.5.4. The proposed development will involve significant works with potential to give rise to release of materials into the hydrological environment throughout the construction stage. These works are detailed in the submitted report e.g., felling of commercial forestry, excavation works, watercourse crossings, new road construction, construction of hardstanding for turbines, sub- station construction, movement of construction vehicles through site etc. The report also highlights that these works which will take place within areas which lie in proximity to the Stracashel River or the Stranagoppoge River or will ultimately drain into these watercourses, via hydrological pathways of various lengths.
- 9.5.5. Taking account of the characteristics of the proposed development in terms of its location and scale of works, the species of conservation interest and conservation objectives for European sites within the zone of influence, I consider that the following impact mechanisms need to be examined:

Construction (estimated duration: 12-18 months)

- Pollution with the potential to impact on QI species of downstream SAC's, including surface water pollution with subsequent impacts on water quality and habitats in the River Finn SAC and West of Ardara/Maas Road SAC.
- Loss / disturbance of ex-situ feeding or roosting habitats that support QI species of nearby SPA's and SAC's due to disturbance associated with construction activities and increased human activity.
- Changes to the local water environment with the potential to impact on QI species of nearby SPA's and SAC's (flow rates, volume, quality) arising from construction works within a peatland environment.

Operational Phase (estimated duration: 30 years)

- Pollution with the potential to impact on QI species of downstream SAC's, including surface water pollution with subsequent impacts on water quality and habitats in the River Finn SAC and West Of Ardara/Maas Road SAC.
- Loss of or disturbance of ex-situ feeding or roosting habitats that support QI species of nearby SPA's and SAC's.
- Displacement / disturbance of QI species of nearby SPA's and SAC's due to disturbance associated with the operation of the windfarm.
- Disruption or interruption of routes used by wintering birds while migrating or making local movements between sites as a result of the presence of the turbines (the 'barrier effect').
- Mortality of QI species of nearby SPA's due to collision risk with proposed turbines.

Decommissioning

- Pollution with the potential to impact on QI species of downstream SAC's, including surface water pollution with subsequent impacts on water quality and habitats in the River Finn SAC and West Of Ardara/Maas Road SAC.
- Disturbance & displacement of SCI /QI species of nearby SPA's and SAC's due to disturbance associated with decommissioning activities and increased human activity.

9.5.6. In relation to groundwater pathways, most of the bedrock in the area is covered in peat / poor draining soil which provides a protective cover to groundwater. The potential for connectivity to European sites via groundwater is therefore excluded (EIAR Chapter 6 Soils, Geology and Hydrogeology; and Chapter 7 Water refer).

At this juncture it is important to mention the additional risk of peat slippage and the possible resultant impacts that may occur on water quality and QIs reliant on good water quality. This concern was also raised in the Department's submission on file and by several observers to the appeal. In order to avoid repetition the Board is referred to Section 8.6 of this report which contains a detailed assessment regarding potential for peat slippage associated with the proposed development (also see Chapter 6 of the EIAR and Appendix 5 of Volume 3 of the EIAR). In summary the findings of this assessment concluded that in general peat depths across the wind farm site were less than 1m deep. While some discrete areas of peat were recorded as being up to 5.4m deep, these were recorded to be located within relatively flat narrow basins which are restricted by ridges of bedrock, which was also tested as being extremely strong. Furthermore, I note that the proposals will not utilise floating roads, with areas of deep peat to be avoided by proposed access tracks. It is assessed that the risk of a peat slippage occurring at the proposed site is negligible. I am therefore satisfied that no likely significant water quality or habitat deterioration effects are therefore predicted to arise as a result of the proposed development through peat slippage.

9.6. Potential Effects on European Sites

9.6.1. Table 9.1 below contains a summary of European Sites that occur within 15 km/within a possible ZOI of the proposed development. Where a possible connection between the development and a European site has been identified, these sites are examined in more detail.

9.6.2. The assessment was informed by information contained in the AA Screening Report and NIS submitted to the Board in January 2022. Section 5.3 of the submitted report details 'possible effect's and examines the likelihood of significant effects occurring as a result of Habitat Loss, Water Quality and Habitat Deterioration, Aerial Noise and Visual Disturbance, Collision Risk and Barrier Effects.

- 9.6.3. The assessment below also relies on relevant information contained in the EIAR submitted to the Board in January 2022 (including Chapter 10 Biodiversity, Chapter 6 Soil, Geology and Hydrogeology and Chapter 7 Water) and in the submitted CEMP that is appended to the NIS. Confidential information submitted as part of the appeal, which provided further information in relation to Merlin flight records, record tables and map locations of nesting sites for the years 2019 and 2020 were also consulted. In view of the importance of the area for bird species this information forms the core dataset for the assessment of effects on ornithology.
- 9.6.4. In addition to the sites listed in Table 9.1 overleaf, I note that the applicant's submitted Screening for AA also contains an assessment of any likely significant effects on the QIs/SCIs of designated sites within proximity of the compensation forestry site in County Mayo, however at this juncture it is necessary to highlight that any proposed new forestry, notwithstanding the links to the current application is subject to a separate licensing procedure under the Forestry Act and therefore is governed by the relevant assessments required under same. Therefore, the compensatory/replacement forestry does not form part of the assessment under this report.

Table 9.1 Assessment of potential effects on European sites

Special Areas of Conservation (SACs)		
European Site (code) and distance from proposed site (km)	List of Qualifying interest /Special conservation Interest	Potential for Likely Significant Effects
West of Ardara/Maas Road SAC [000197] Site overlaps SAC boundary	[1130] Estuaries [1140] Mudflats and sandflats not covered by seawater at Low tide [1160] Large shallow inlets and bays [1210] Annual vegetation of drift lines [1330] Atlantic salt meadows (Glauco-Puccinellietalia Maritimae) [1410] Mediterranean salt meadows (Juncetalia maritime) [2110] Embryonic shifting dunes [2120] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2140] Decalcified fixed dunes with Empetrum nigrum [2150] Atlantic decalcified fixed dunes (Calluno-Ulicetea) [2170] Dunes with Salix repens ssp. argentea (Saliciion arenariae) [2190] Humid dune slacks [21A0] Machairs (in Ireland) [3110] Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3130] Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or Isoeto-Nanojuncetea [4010] Northern Atlantic wet heaths with Erica tetralix [4030] European dry heaths [4060] Alpine and Boreal heaths [5130] Juniperus communis formations on heaths or calcareous grasslands [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (Important orchid sites) [6410] Molinia meadows on calcareous, peaty or clayey-silt laden soils (Molinion caeruleae) [6510] Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis) [7130] Blanket bogs (if active bog) [7150] Depressions on peat substrates of the	<p>No direct habitat loss (see Section 9.5.2 above) – areas of proposed site that overlap with SAC boundary are areas of bridge and roadway.</p> <p>Possible indirect effects - The site area is drained by several streams and a network of drainage ditches that drain to the River Stracashel within the area of the SAC. There is a possibility that surface water discharge/run-off from the site would contain pollutants (e.g., sediment, silt, oils) that could impact on water quality in the downstream SAC during construction, operational and decommissioning phases and that QIs such as Otter, Salmon and FWPM may be impacted.</p> <p>There is also the potential for noise and visual disturbance to mobile QIs in particular otter.</p> <p>The potential for likely significant effects on the above QI's cannot be screened out. Stage II AA required.</p>

	<p>Rhynchosporion [7230] Alkaline fens [1013] Geyer's whorl snail Vertigo geyeri [1029] Freshwater pearl mussel Margaritifera margaritifera [1065] Marsh Fritillary Euphydryas aurinia [1106] Salmon Salmo salar [1355] Otter Lutra lutra [1365] [Harbour seal Phoca vitulina [1395] Petalwort Petalophyllum ralfsii [1833] Slender Naiad Najas flexilis</p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	
<p>River Finn SAC [002301] Site overlaps SAC boundary</p>	<p>[3110] Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [4010] Northern Atlantic wet heaths with Erica tetralix [7130] Blanket bogs (if active bog) [7140] Transition mires and quaking bogs [1106] Salmon Salmo salar [1355] Otter Lutra lutra.</p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No direct habitat loss (see Section 9.5.3 above) – areas of proposed site that overlap with SAC boundary are areas of bridge and roadway.</p> <p>Possible indirect effects - The site area is drained by several streams and a network of drainage ditches that drain to the River Stranagoppoge within the area of the SAC. There is a possibility that surface water discharge/run-off from the site would contain pollutants (e.g., sediment, silt, oils) that could impact on water quality in the downstream SAC during construction, operational and decommissioning phases, thus impacting on water dependant species such as Otter and Salmon. The potential for likely significant effects on the above QI's cannot be screened out. Stage II AA required.</p>
<p>Lough Nillan Bog (Carrickatlieve) SAC [000165] c.1.7km south</p>	<p>[3110] Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [7130] Blanket bogs (* if active bog)</p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site.</p> <p>Potential for impacts <u>screened out.</u></p>
<p>Meenaguse Scragh SAC [001880] c.4.1km south</p>	<p>[4010] Northern Atlantic wet heaths with Erica tetralix</p> <p>Conservation objectives To maintain the favourable conservation condition of QI. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site.</p> <p>Potential for impacts <u>screened out.</u></p>

<p>Cloghernagore Bog and Glenveagh National Park SAC [002047] c.4.9km north</p>	<p>[3110] Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3260] Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [4010] Northern Atlantic wet heaths with Erica tetralix [4030] European dry heaths [4060] Alpine and Boreal heaths [6410] Molinia meadows on calcareous, peaty or clayey-silt laden soils (Molinion caeruleae) [7130] Blanket bogs (if active bog) [7150] Depressions on peat substrates of the Rhynchosporion [91A0] Old sessile oak woods with Ilex and Blechnum in the British Isles [1029] Freshwater pearl mussel Margaritifera Margaritifera [1106] Salmon Salmo salar [1355] Otter Lutra lutra [1421] Killarney Fern Trichomanes speciosum</p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site. No mobile species of qualifying interest that could frequent the site.</p> <p>Potential for impacts <u>screened out.</u></p>
<p>Meentygrannagh Bog SAC [000173] c. 6.2km northeast</p>	<p>[7130] Blanket bogs (if active bog) [7140] Transition mires and quaking bogs [7230] Alkaline fens [6216] Slender green feather-moss Hamatocaulis Vernicosus</p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site.</p> <p>Potential for impacts <u>screened out.</u></p>
<p>Coolvoy Bog SAC [001107] c. 6.5km north</p>	<p>[7130] Blanket bogs (if active bog)</p> <p>Conservation objective: To restore the favourable conservation condition of QI. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site.</p> <p>Potential for impacts <u>screened out.</u></p>
<p>Meenaguse/Ardbane Bog SAC [000172] c. 7.4km south</p>	<p>[7130] Blanket bogs (if active bog)</p> <p>Conservation objective: To restore the favourable conservation condition of QI. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site.</p> <p>Potential for impacts <u>screened out.</u></p>

<p>Gannivegil Bog SAC [000142] c.8.8km northwest</p>	<p>[3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [4010] Northern Atlantic wet heaths with <i>Erica tetralix</i> [7130] Blanket bogs (if active bog)</p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site.</p> <p>Potential for impacts <u>screened out</u>.</p>
<p>Lough Eske and Ardnamona Wood SAC [000163] c.11.7km south</p>	<p>[3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [7220] Petrifying springs with tufa formation (<i>Cratoneurion</i>) [91A0] Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [1029] Freshwater pearl mussel <i>Margaritifera margaritifera</i> [1106] Salmon <i>Salmo salar</i> [1421] Killarney Fern <i>Trichomanes speciosum</i></p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site. No mobile species of qualifying interest that could frequent the site.</p> <p>Potential for impacts <u>screened out</u>.</p>
<p>Slieve Tooley/Tormore Island/Loughros Beg Bay SAC [000190] c.13.3km southwest</p>	<p>[1230] Vegetated sea cliffs of the Atlantic and Baltic coasts [2110] Embryonic shifting dunes [2120] Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2140] Decalcified fixed dunes with <i>Empetrum nigrum</i> [2150] Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [4060] Alpine and Boreal heaths [7130] Blanket bogs (if active bog) [1014] Narrow-mouthed Whorl Snail <i>Vertigo angustior</i> [1355] Otter <i>Lutra lutra</i> [1364] Grey Seal <i>Halichoerus grypus</i></p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>No Direct Impacts. No hydrological or other connection with the site. No mobile species of qualifying interest that could frequent the site.</p> <p>Potential for impacts <u>screened out</u>.</p>
<p>River Foyle and Tributaries SAC [UK0030320]</p>	<p>[3260] Watercourses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [1106] Salmon <i>Salmo salar</i> [1355] Otter <i>Lutra lutra</i></p>	<p>Hydrologically connected to the River Foyle and Tributaries SAC via the Stranagoppoge River and subsequently the River Finn, however it should be noted that this follows a hydrological pathway of some 51km at which point the supported flows to which the Stranagoppoge River contribute are around</p>

c. 40.6km east	Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at River Foyle & Tributaries SAC Conservation Objectives 2015 (daera-ni.gov.uk)	252m ³ /s with the total catchment inclusive of an area of 472km ² . It is considered likely that in the context of such a catchment and the supported flows, any inputs arising as a result of the proposed development are likely to be subject to significant dilution. Such dilution would not be considered a mitigation measure as it is naturally occurring and does not require input/adjustment as part of the proposal, therefore it has been determined that there is no potential for LSEs arising through water quality and habitat deterioration to the River Foyle and Tributaries SAC and Potential for impacts can be <u>screened out</u> .
Special Protection Areas (SPAs)		
European Site (code) and distance from proposed site (km)	List of Qualifying interest /Special conservation Interest	Potential for Effects
Lough Nillan Bog SPA [004110] c.1.7km south	[A098] Merlin Falco columbarius [A140] Golden Plover Pluvialis apricaria [A395] Greenland white-fronted goose Anser albifrons flavirostris [A466] Dunlin Calidris alpina schinzii Conservation objectives: To maintain or restore the favourable conservation condition of SCIs as listed. Refer to conservation objectives available at CO004110.pdf (npws.ie)	There will be no direct effects on the SPA, but there is potential for indirect effects. Windfarm site within 1.7 km of the SPA at point of grid connection route. Impact assessment of specific species: Dunlin have not been recorded historically or as part of the surveys on site – <u>screened out</u> . Greenland white-fronted geese – none were recorded foraging or roosting within the environs of the site (zone of sensitivity 600m) and no flight lines were detected through the site - <u>screened out</u> . Golden Plover - The results of bird surveys carried out on site recorded three observations of golden plover to the outside of the site boundary with no flight plans through the site. These were however not considered to constitute any consequential ecological linkages to breeding populations within the SPA – <u>screened out</u> .

		<p>Merlin - A single pair of breeding merlin were recorded in both 2019 and 2020, within close proximity to the proposed development site respectively and with a nesting site within 5.2km and 5.1km of the SPA respectively. Based on maximum estimated territory size of 6km for Merlin and separation distance between windfarm development and SPA the potential for indirect effects associated with aerial noise and visual disturbance, collision mortality and barrier effect cannot be excluded. Potential for likely significant effects on SCI's cannot be screened out. Stage II AA required.</p>
<p>Derryveagh and Glendowan Mountains SPA [004039] c. 2.4km north</p>	<p>[A001] Red-throated diver <i>Gavia stellata</i> [A098] Merlin <i>Falco columbarius</i> [A103] Peregrine <i>Falco peregrinus</i> [A140] Golden Plover <i>Pluvialis apricaria</i> [A466] Dunlin <i>Calidris alpina schinzii</i></p> <p>Conservation objectives: To maintain or restore the favourable conservation condition of SCIs as listed. Refer to conservation objectives available at CO004039.pdf (npws.ie)</p>	<p>There will be no direct effects on the SPA, but there is potential for indirect effects. Disturbance displacement from SPA-supporting habitat within the application site and from collision risk with proposed turbines were considered to pose potential for direct/indirect effects on species that are features of Interest of the SPAs.</p> <p>Red-throated diver – this species was not recorded on site nor within a 2km range of the site. All known breeding loughs within the SPA are distributed in the northern extent of the SPA site, which is in excess of 15km from the proposed development site and therefore beyond the core foraging for this breeding species -<u>screened out</u>.</p> <p>Peregrine Falcon - The results of bird surveys carried out on site recorded two brief observations of peregrine falcon flying through the wind farm site. However, given the lack of suitable nesting sites and available prey these sightings were not considered to constitute any consequential ecological linkages to breeding populations within the SPA – <u>screened out</u>.</p> <p>Golden Plover - The results of bird surveys carried out on site recorded three observations of golden plover to the outside of the site boundary with no flight plans through the site. These were however not considered to constitute any consequential ecological linkages to breeding populations within the SPA – <u>screened out</u>.</p> <p>Merlin - Having regard to the proximity of the site to this designated SPA and notwithstanding the fact that the Birds of SCI interest were not found to nest on the project site, two Merlin nests were recorded within close proximity to</p>

		the site and were recorded using the site for foraging. While I accept the that closest area of supporting habitat in the SPA at its closest point is over c. 6.4km north of the proposed site boundary (Lough Finn is exclude based on unsuitable habitat) based on the precautionary principle and the site proximity it is appropriate to screen this site in for the purpose of Stage II AA. Stage II AA required.
Sheskinmore Lough SPA [004090] c. 13.4km west	[A395] Greenland white-fronted goose <i>Anser albifrons flavirostris</i> Conservation objective: To maintain or restore the favourable conservation condition of SCI as listed. Refer to conservation objectives available at CO004090.pdf (npws.ie)	Greenland white-fronted geese – none were recorded foraging or roosting within the environs of the site (zone of sensitivity 600m) and no flight lines were detected through the site. No ecological connection with the proposal site and as such no pathway for impacts. Site is outside core foraging range and zone of sensitivity for QI bird species of this SPA. Following desk based study and field surveys undertaken over a 2 year period no important migratory routes were identified in the vicinity of the windfarm site. The potential for direct, indirect and cumulative impacts on populations of SCI bird species associated with this SPA is <u>screened out</u> .
Inishkeel SPA [004116] c. 14.0km west	[A045] Barnacle Goose <i>Branta leucopsis</i> Conservation objectives: To maintain or restore the favourable conservation condition of SCI as listed. Refer to conservation objectives available at CO004116.pdf (npws.ie)	Barnacle geese wintering in Ireland rarely venture more than a few kilometres form the coast and therefore the population associated with this SPA is considered beyond the zone of influence of the proposed wind farm site. Potential for impacts <u>screened out</u> .
Durnesh Lough SPA [004145] c. 25.5km southwest	[A038] Whooper swan <i>Cygnus cygnus</i> [A395] Greenland white-fronted goose <i>Anser albifrons flavirostris</i> Conservation objectives: To maintain or restore the favourable conservation condition of SCIs as listed. Refer to conservation objectives available at CO004145.pdf (npws.ie)	Whooper swan – based on low recorded usage of the 500m turbine buffer and limited use of potentially suitable roosting loughs within the 2km turbine buffer it is objectively considered that the proposed development area is not important for this species. Greenland white-fronted geese – none were recorded foraging or roosting within the environs of the site (zone of sensitivity 600m) and no flight lines were detected through the site. Potential for impacts <u>screened out</u> .
Lough Foyle SPA (NI) [UK9020031] c. 45km northeast	[A005] Great crested grebe <i>Podiceps cristatus</i> [A037] Bewick's Swan <i>Cygnus columbianus bewickii</i> [A038] Whooper swan <i>Cygnus cygnus</i> [A043] Greylag goose <i>Anser anser</i> [A046] Light-bellied brent goose <i>Branta bernicla hrota</i> [A048] Shelduck <i>Tadorna tadorna</i> [A050] Wigeon <i>Anas penelope</i> [A052] Teal <i>Anas</i>	This European Site lies at a great distance downstream (77km) of the proposed development, via the Stranagoppoge River and River Finn. The Lough drains a catchment of approximately 3,700km ² and supports an energetic tidal environment. Inputs potentially arising as a result of the

	<p>crecca [A053] Mallard Anas platyrhynchos [A063] Eider Somateria mollissima [A069] Red-breasted merganser Mergus serrator [A130] Oystercatcher Haematopus ostralegus [A140] Golden plover Pluvialis apricaria [A142] Lapwing Vanellus vanellus [A143] Knot Calidris canutus [A149] Dunlin Calidris alpina [A157] Bar-tailed godwit Limosa lapponica [A160] Curlew Numenius arquata [A162] Redshank Tringa totanus Waterfowl Assemblage Habitat Extent Roost Site Locations</p> <p>Conservation objectives: To maintain each feature in favourable condition. Refer to conservation objectives available 1 st April 2015 V4 (DAERA 2015) - Lough Foyle SPA Conservation objectives 2015 (daera-ni.gov.uk)</p>	<p>proposed development are likely to be subject to significant dilution and mixing to background levels, as well as the separation distance involved.</p> <p>This SPA is not noted as being particularly sensitive to sedimentary inputs, with potential water quality impacts being associated with chemical inputs (as set out in the sites COs). Given that the potential for chemical inputs associated with the proposals is minimal and associated with relatively small volumes of potential petrochemical fuels, oils and other chemicals for use during construction phase, it is not anticipated that the proposals would have potential to give rise to any likely significant effects upon this site through water quality and habitat deterioration or for significant effects to occur on downstream SCIs within this SPA. Potential for impacts <u>screened out</u>.</p>
<p>Lough Foyle SPA (RoI) [004087] c. 57.4km northeast</p>	<p>[A001] Red-throated diver Gavia stellata [A005] Great crested grebe Podiceps cristatus [A037] Bewick's Swan Cygnus columbianus bewickii [A038] Whooper swan Cygnus cygnus [A043] Greylag goose Answer answer [A046] Light-bellied brent goose Branta bernicla hrota [A048] Shelduck Tadorna tadorna [A050] Wigeon Anas penelope [A052] Teal Anas crecca [A053] Mallard Anas platyrhynchos [A063] Eider Somateria mollissima [A069] Red-breasted merganser Mergus serrator [A130] Oystercatcher Haematopus ostralegus [A140] Golden plover Pluvialis apricaria [A142] Lapwing Vanellus vanellus [A143] Knot Calidris canutus [A149] Dunlin Calidris alpina [A157] Bar-tailed godwit Limosa lapponica [A160] Curlew Numenius arquata [A162] Redshank Tringa totanus [A179] Black-headed gull Chroicocephalus ridibundus [A182] Common gull Larus canus [A184] Herring gull Larus argentatus [A999] Wetland and waterbirds. Conservation objectives: To maintain the favourable conservation condition of SCIs and habitats as listed. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)</p>	<p>While there are numerous birds listed in this SPA which are of SCI interest, either none of them forage in inland areas or the area in which the proposed windfarm site is located does not provide suitable grassland foraging areas which would attract the SCI bird species in question. In addition, these are mainly coastal species. Site is outside core foraging range and zone of sensitivity for SCI bird species of this SPA. Potential for impacts <u>screened out</u>.</p>

9.7. Screening Conclusion

- 9.7.1. The proposed development was 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, it has been concluded that the potential for significant effects on four European Sites namely, West of Ardara/Maas Road SAC [000197], River Finn SAC [002301], Lough Nillan Bog SPA [004110] and Derryveagh and Glendowan Mountains SPA [004039] in view of the Conservation Objectives of those sites cannot be excluded at the screening stage, and that Stage II Appropriate Assessment is therefore required in respect of these sites. It can be objectively concluded on the basis of available scientific data that the proposed development individually or in combination with other plans or projects would not be likely to have a significant effect on the those remaining European sites listed in Table 10.1, nor any other sites beyond those considered.
- 9.7.2. The AA Screening above conclusion 'screens out' the River Foyle and Tributaries SAC [UK0030320] from further consideration, it is noted that the submitted NIS has screened same site in. The justification for screening out this site is provided under Table 9.1 above and in summary it was concluded that although connected hydrologically to the site, firstly, given the separation distances involved, some 51km after which point supported flows to which the Stranagoppoge River contribute are around 252m³ /s with the total catchment inclusive of an area of 472km² and secondly, due to the significant distance involved and the dilution factors involved, that any runoff from the proposed site could not contribute to any likely significant effects on this SAC. This site has therefore been screened out at this stage.
- 9.7.3. No measures designed or intended to avoid or reduce any harmful effects of the project on a European Site have been relied upon in this screening exercise.

Appropriate Assessment (AA)

9.8. Overview

- 9.8.1. The requirements of Article 6(3) as related to AA of a project under part XAB, Section 177V of the Planning and Development Act 2000 (as amended) is considered fully in this section. The areas addressed section are as follows:
- Compliance with Article 6(3) of the EU Habitats Directive;
 - The Natura Impact Statement and associated documents; and
 - Appropriate assessment of implications of the proposed development on the integrity each European site.

9.9. Compliance with Article 6(3) of the EU Habitats Directive

- 9.9.1. The Habitats Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) of this Directive requires that any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects shall be subject to AA of its implications for the site in view of the site's conservation objectives. The competent authority must be satisfied that the proposal will not adversely affect the integrity of the European site before consent can be given.
- 9.9.2. The proposed development is not directly connected to or necessary to the management of any European site and therefore is subject to the provisions of Article 6(3).

9.10. The Natura Impact Statement (NIS)

- 9.10.1. The application included a 'Natura Impact Statement' prepared by RPS dated 17th September 2021, which examines and assesses potential adverse effects of the proposed development on the West of Ardara/Maas Road SAC, the River Finn SAC, River Foyle and Tributaries SAC (UK), Lough Nillan Bog SPA and Derryveagh and Glendowan Mountains SPA. It is a detailed document which provides information and appraises the potential that both the proposed wind farm and grid connection

works and other relevant plans and projects in combination with this would have on the integrity of the relevant European sites in view of best scientific knowledge and the conservation objectives of the sites. The NIS was prepared in line with current best practice guidance and contains, inter alia, a description of the proposed development, the legislative background, detailed commentary on the relevant European sites, an overview of the potential indirect impacts that could occur, consideration of the in-combination effects, mitigation measures and an assessment of same and conclusion.

9.10.2. The applicant's NIS concluded that "*Following the implementation of a range of mitigation measures in respect of these impact pathways it is considered that any likely significant effects will be fully mitigated and as such the proposed development will not give rise to any adverse impacts to the integrity of any European Site*". Likely significant effects listed and relevant to the concluding statement include: "*Water quality and habitat deterioration effect, through sedimentation and pollution; and Aerial noise and visual disturbance, leading to effects associated with displacement of merlin*".

9.10.3. Having reviewed the documents, submissions, and consultation with the NPWS etc, I am satisfied that the information allows for a complete assessment of any adverse effects of the development, on the conservation objectives of the following European sites alone, or in combination with other plans and projects:

- West of Ardara/Maas Road SAC (000197);
- River Finn SAC (002301),
- Lough Nillan Bog SPA (004110), and
- Derryveagh and Glendowan Mountains SPA (004039).

Submissions Received and Applicant's Response

9.10.4. A submission on the application was received from the Department (DHLGH) which primarily concentrated on the potential impacts on merlin, golden eagle and white-tailed eagle. The issues raised in relation to the two latter species have already been examined under Section 8.5 of this report and as neither species is a Special Conservation Interest (SCI) of any of the SPAs concerned these shall not be discussed further under this AA, save for where they may impact on QIs of any of the

designated sites concerned. I note the submission received refers to ambiguity regarding the distances from the subject site and the nearby Lough Nillan Bog SAC and SPA and Derryveagh and Glendowan Mountains SPA. Having examined the figures presented it would appear that correct figures are given in the NIS and that incorrect distances are presented in the Avi-fauna report (see Section 10(ii) 4.1.3) however I can confirm that the distances referred to in the remainder of the chapter including references to distance from recorded Merlin nests (record from 2019 and 2020) are correct, these have been cross referenced with Volume 3A, Appendix 7 (part confidential).

- 9.10.5. The Department considers the NIS to be deficient as it does not contain a robust scientific assessment (i.e. confidence levels) of whether the merlin pair recorded in 2019 and 2020 less than 6km from the Lough Nillan SPA form part of, or support the QI population (N=5 pairs) for that European site. Moreover, there is no assessment of what effect displacement of a breeding pair would have on the integrity of the merlin populations for the two European sites concerned.
- 9.10.6. In response to the concerns raised the applicant has submitted the information requested by the Department as part of the appeal documentation (see Appendix D – confidential information). This includes map data showing flight lines indicating the activity of merlin recorded during the surveys, the proportion of foraging events undertaken on those flight lines and information on whether these flight lines are within or outside of the 500m buffer areas surrounding each proposed turbine. The applicant states that the data demonstrates that the majority of merlin activity recorded at the site took place outside of the 500m turbine buffer.
- 9.10.7. Section 5.3.3 of the NIS sets out the rationale in respect of the likelihood that the merlin pair recorded foraging within the site comprise a portion of the populations associated with the relevant SPAs and states that given the separation distances involved from the recorded nest sites (not the nearest point on the proposed site – grid connection) to suitable foraging habitat within the SPAs (excluding Lough Finn which does not contain suitable habitat at 3.1km from the nest locations) are further than a distance of 5km (NatureScot) (2016)¹⁰ they are therefore outside of the core foraging range from these nest sites. The applicant states that NatureScot (2016)

¹⁰ SNH (2016) Assessing Connectivity with SPAs Guidance (Version 3).

guidance recommends that connectivity to sites designated for merlin should be considered up to 5km. However, I note that the Lough Nillan Bog SPA is within the 6km buffer of the nest sites as shown in the submitted appeal document. Also the boundary of the same SPA is only marginally outside of the 5km buffer from these nest sites, 5.1km and 5.2km respectively. Given that Lough Nillan SPA does provide suitable foraging habitat for merlin, the slight increase in distance of c.100-200m would in my opinion not preclude the possibility that this merlin pair may utilise parts of the SPA to forage during the breeding season. The applicant argues however that given the ample availability of suitable open foraging habitats surrounding the nest area as well as the separation distances involved if there is a functional link between the merlin pair and usage of foraging habitats within the SPA's it cannot be considered as an ecologically important one. However, again I note how close the separation distance is to the 5km threshold and therefore I believe that the precautionary principle should be applied in this case.

9.10.8. In relation to potential impacts of displacement, the applicant states in their appeal that RSPB guidance¹¹ which is supported by numerous studies indicates that merlin are highly likely to habituate to operational wind farms and furthermore in an analysis of a range of expert opinions on the likely disturbance distances from merlin, Whitfield et al. (2008)¹² concluded that disturbance to merlin is unlikely to occur at distances greater than 500m. On that basis, the applicant considers that most development works are unlikely to affect merlin which comprise a portion of the population of nearby relevant SPA and furthermore that the development will not give rise to significant adverse impacts upon the species following the implementation of mitigation measures to address potential construction phase disturbance to the species.

9.10.9. The applicant has stated that they have addressed additional concerns raised by the Department in relation to the impacts of aerial noise and visual displacement by ensuring that appropriate mitigation measures have been included in the NIS. No construction will be permitted within 500m of the Merlin nesting locations, which will limit all works on tracks leading to T1/T2 and T3/T4. If merlin occupy an alternative

¹¹ J.A. Bright, R.H.W. Langston, S. Anthony. Mapped and written guidance in relation to birds and onshore wind energy development in England. RSPB Research Report no.35 Bird Sensitivity Mapping.

¹² Whitfield, p., Ruddock, M. and Bullman, R. (2008) Expert opinion as a tool for quantifying bird tolerance to human disturbance. *Biological Conservation* 141 2708-2717.

nest site during construction, a 500m exclusion zone buffer will be applied where all construction activities will only be permitted outside the bird breeding season (1st March to 31st August). The applicant has also sought to provide a theoretical distribution of breeding merlin pairs within a 10X10km grid square surrounding the recorded pair. The illustration is designed to serve as a guide for the likely distribution of merlin pairs on the basis of nonscientific information and demonstrates that at nonbreeding densities the recorded pair is unlikely to compromise the nearest neighbouring two breeding pairs within either SPA. The applicant also states that it is important to recognise that Merlin rarely breed in the same location each year and that pairs can move 0.3 to 3.5km between breeding seasons, this theory would appear to be confirmed on site given the absence of any nests in 2021.

9.10.10. In addition to concerns regarding merlin, the Department also raise concerns regarding FWPM and Salmon and with specific regard to Horizontal Directional Drilling consider the potential risks and impacts associated with this task and the presence downstream and sensitivity of QI species (i.e. Salmon and FWPM) that the NIS contains inadequate details with regard to 1. Distance of drill launch and receiver pits from watercourses and associated mitigation. 2. Frac-Out plan, response actions and assessment of associated environmental risks and impacts. The applicant has responded to these concerns outlining the details of the HDD process and also proposed mitigation to ensure no adverse impact on site integrity, these are examined in greater detail in the sections that follow.

9.11. Appropriate Assessment of Implications of the Proposed Development

9.11.1. The following is a summary of the objective scientific assessment of the implications of the project on the Qualifying Interest (QI) and Special Conservation Interest (SCI) of the European sites using the best scientific knowledge in the field. All aspects of the project which could result in significant effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are considered and assessed. I have relied on the following guidance:

- DoEHLG (2009). Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of the Environment, Heritage and Local Government, National Parks and Wildlife Service.

- EC (2002) Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and 6(4) of the Habitats Directive 92/43/EC.
- EC (2018) Managing Natura 2000 sites. The provisions of Article 6 of the Habitats Directive 92/43/EEC.

9.12. European Sites

9.12.1. The following sites are subject to Appropriate Assessment:

- West of Ardara/Maas Road SAC (000197);
- River Finn SAC (002301),
- Lough Nillan Bog SPA (004110), and
- Derryveagh and Glendowan Mountains SPA (004039),

9.12.2. A description of the sites and their QI/SCI, including any relevance to the ZOI of Likely Significant Effects of the Proposed Development and also any source-pathway-receptor /link(s), are set out in the NIS, and summarised in Table 9.2 to Table 9.5 of this report as part of my assessment. I have also examined the Natura 2000 data forms as relevant and the Conservation Objectives supporting documents for these sites available through the NPWS website (www.npws.ie).

9.13. Aspects of the Proposed Development that could affect Conservation Objectives

9.13.1. The proposed works will take place within areas which lie in proximity to the Stracashel River or the Stranagoppoge River or will ultimately drain into these watercourses, via hydrological pathways of various lengths. In my opinion, having reviewed the development proposals, the main aspect of the proposed development that could affect the conservation objectives of the sites include;

- Potential for direct impacts to water quality through siltation and pollution of surface waters and subsequently the freshwater environment which could give rise to the potential likely significant effects through:

- Accidental release of highly alkaline contaminants from concrete and cement during the construction of hardstanding and other structures;
 - General water quality impacts associated with works machinery, infrastructure and on-land operations including the temporary storage of construction materials, oils, fuels and chemicals;
 - Sedimentation through release of sediments, soils and other materials from proposed excavation works and vehicular movements within the site into the freshwater environment, including through run off and during works associated with watercourse crossings;
 - The release of HDD drilling fluid into watercourses through inadvertent 'break-out' or rupture, such fluids include bentonite clay which may give rise to sedimentation and environmental toxicity; and
 - Potential operational spillage of cooling oils associated with the sub-station site, or the use of chemical fuels and lubricants utilised in routine turbine maintenance throughout the operational phase.
- Potential for indirect effects on QIs through hydrological connectivity.
 - Potential for ex-situ habitat loss, displacement and collision mortality of SCIs.
 - Potential for indirect aerial noise and visual disturbance and subsequent displacement effects to merlin present on the proposed development site.

9.13.2. Tables 9.2 to 9.5 summarise the AA and site integrity test for each designated site. The conservation objectives (COs) for listed European sites have been examined and assessed with regard to the identified potential significant effect and all aspects of the project, alone and in-combination with other plans and projects. Mitigation measures proposed to avoid and reduce impacts to a non-significant level have been assessed, and clear, precise, and definitive conclusions reached in terms of adverse effects on the integrity of the European site.

Table 9.2 West of Ardara/Maas Road SAC (000197)

The West of Ardara/Maas Road SAC lies within the redline boundary of the proposed development within the grid connection route section, which will cross the SAC at the Stracashel River via an existing private access road which services the Tievebrack Eirgrid Station. This underground cable grid connection will be installed using a HDD methodology and as such will not give rise to any loss of habitat within the West of Ardara/Maas Road SAC.

West of Ardara/Maas Road SAC (000197)				
Key Issues that could give rise to adverse effects:				
<ul style="list-style-type: none"> - Water quality and water dependant habitats - Disturbance of QI species 				
Conservation Objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)				
Summary of Appropriate Assessment				
Qualifying Interest feature/s	Potential adverse effects	Mitigation measures	In-combination effects	Can adverse effects on integrity be excluded
[1130] Estuaries [1160] Large shallow inlets and bays [1140] Mudflats and sandflats not covered by seawater at Low tide [1210] Annual vegetation of drift lines [1330] Atlantic salt meadows (Glauco-Puccinellietalia Maritimae) [1410] Mediterranean salt meadows (Juncetalia maritime) [2110] Embryonic shifting dunes [2120] Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2130] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2140] Decalcified fixed	No direct effect. QIs include a number of terrestrial habitats and species and coastal habitats and species which are not present on site or are either not hydrologically linked to the proposals or are coastal habitats which lie downstream of the proposed development. In relation to costal habitats and species, these QIs are located at a distance of at least 21.1km downstream of the site. At this location flows of around 92.5m ³ /s arise from a	N/A	Assessed as part of Table 5.2 of the NIS. No negative in-combination effects to European sites are expected.	Yes

<p>dunes with <i>Empetrum nigrum</i> [2150] Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) [2170] Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Saliciion arenariae</i>) [2190] Humid dune slacks [21A0] Machairs (in Ireland) [3110] Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) [3130] Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoeto-Nanojuncetea</i> [4010] Northern Atlantic wet heaths with <i>Erica tetralix</i> [4030] European dry heaths [4060] Alpine and Boreal heaths [5130] <i>Juniperus communis</i> formations on heaths or calcareous grasslands [6210] Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (Important orchid sites) [6410] <i>Molinia</i> meadows on calcareous, peaty or clayey-silt laden soils (<i>Molinion caeruleae</i>) [6510] Lowland hay meadows (<i>Alopecurus pratensis</i>, <i>Sanguisorba officinalis</i>) [7130] Blanket bogs (if active bog) [7150] Depressions on peat substrates of the <i>Rhynchosporion</i> [7230] Alkaline fens [1013] Geyer's whorl snail <i>Vertigo geyeri</i>[1365] [Harbour seal <i>Phoca vitulina</i> [1395] Petalwort <i>Petalophyllum ralfsii</i></p>	<p>catchment comprising an area of 126km². Over such a distance and in the context of such supported flows originating across the large catchment, in addition to mixing in the energetic tidal marine environment, any potential water quality and habitat deterioration effects arising as a result of the proposed development are likely to be undetectable at the point at which they interact with these coastal habitats which form qualifying interests for the SAC.</p> <p>In relation to marsh fritillary, I note that no areas which support dense patches of devil's bit scabious (habitat) are to be lost as a result of the proposed development and in general habitat for the species within the site is considered to be largely unsuitable. No marsh fritillary was recorded on site during surveys.</p> <p><u>Potential for adverse effects on all the above QIs is ruled out.</u></p>			
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<p>[1065] Marsh Fritillary <i>Euphydryas aurinia</i> [1833] Slender Naiad <i>Najas flexilis</i>.</p>				
<p>[1029] Freshwater pearl mussel <i>Margaritifera margaritifera</i> [1106] Salmon <i>Salmo salar</i></p>	<p>Hydrological impacts:</p> <p>FWPM - Sensitive to water quality and habitat deterioration effects. Siltation and other water quality effects leading to, mortality, failed recruitment and population decline.</p> <p>Salmon - Siltation and other water quality effects leading to, mortality, prey reduction, failed recruitment and population decline.</p> <p>Potential for adverse effects in the absence of mitigation.</p>	<p>Mitigation measures specific to FWPM are set out under Section 7.1.2 of the NIS and those in relation to Water Quality and Habitat Deterioration (for salmon) are detailed under Section 7.1. For convenience the measures have been summarised under Section 9.15.5 below.</p>	<p>Assessed as part of Table 5.2 of the NIS. Following implementation of mitigation no negative in-combination effects to European sites are expected.</p>	<p>Yes</p>
<p>[1355] Otter <i>Lutra lutra</i></p>	<p>Hydrological impacts and Disturbance:</p> <p>Habitat deterioration: Siltation and other water quality effects leading to, mortality, failed recruitment, prey reduction and population decline.</p> <p>There is the potential for direct and indirect impact on Otter as a result of potential sedimentation and pollution of the freshwater environment and also possible disturbance as a result of construction noise and associated</p>	<p>Mitigation measures in relation to Water Quality and Habitat Deterioration are listed under Section 7.1 of the NIS and summarised under Section 9.15 below.</p> <p>Following the implementation of these measures it is envisaged that potential impacts</p>	<p>Assessed as part of Table 5.2 of the NIS. Following implementation of mitigation no negative in-combination effects to</p>	<p>Yes</p>

	<p>vehicular movements. I note that surveys undertaken by Woodrow Sustainable Solutions Ltd. (separate to those conducted for the AA) noted evidence of otter presence, namely a number of spraint locations, in addition to a number of potential holts, recorded along the Stranagoppoge River. The potential holts were located c. 250m from the closest aspect of the proposed works (the proposed grid connection route to the south). It is considered therefore that lengths of watercourse in proximity to the application site are likely to be utilised by otters for foraging and migration and the possibility of otter presence within the development area cannot be excluded. There is, therefore, potential for disturbance to the Otter populations of the area during the construction and decommissioning phases.</p> <p>The Otter population is likely to be associated with the SAC given its proximity.</p> <p>Potential for adverse effects in the absence of mitigation.</p>	<p>upon otter will be fully mitigated.</p>	<p>European sites are expected.</p>	
<p>Overall conclusion: Integrity test - Following the implementation of mitigation, the construction, operation and decommissioning phases of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.</p>				

Table 9.3 – River Finn SAC (002301)

The River Finn SAC lies within the redline boundary of the proposed development within a short section of the local road L-6743-2 between the T1 and T2 access and associated cabling in addition to a short section of the proposed new road within Coillte commercial forestry lands, to the east of local road L-6743-2. Works within these areas will include the movement of construction traffic, the laying of cabling within the roadbed and the construction of a new road which will utilise an existing bridge structure. The proposed development will therefore not give rise to the loss of any areas of watercourse, or semi-natural habitat which form a part of the River Finn SAC.

River Finn SAC [002301]				
Key Issues that could give rise to adverse effects:				
<ul style="list-style-type: none"> - Water quality and deterioration of water dependant habitats - Disturbance of QI species 				
Conservation Objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at ConservationObjectives.rdl (npws.ie)				
Summary of Appropriate Assessment				
Qualifying Interest feature/s	Potential adverse effects	Mitigation measures	In-combination effects	Can adverse effects on integrity be excluded
Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae) [3110] Northern Atlantic wet heaths with Erica tetralix [4010] Blanket bogs (* if active bog) [7130] Transition mires and quaking bogs [7140]	No direct effect. QIs include a number of terrestrial habitats and species and coastal habitats and species which are not present on site or are not hydrologically linked to the proposal. Potential for adverse effects ruled out.	N/A	Assessed as part of Table 5.2 of the NIS. No negative in-combination effects to European sites are expected.	Yes

<p>[1106] Salmon <i>Salmo salar</i></p>	<p>Hydrological impacts: Siltation and other water quality effects leading to, mortality, failed recruitment, prey reduction and population decline.</p> <p>Potential for adverse effects in the absence of mitigation.</p>	<p>Mitigation measures in relation to Water Quality and Habitat Deterioration are detailed under Section 7.1. For convenience the measures have been summarised under Section 9.15 of this report below.</p>	<p>Assessed as part of Table 5.2 of the NIS. Following implementation of mitigation no negative in-combination effects to European sites are expected.</p>	<p>Yes</p>
<p>[1355] Otter <i>Lutra lutra</i></p>	<p>Hydrological impacts and Disturbance:</p> <p>Habitat deterioration: Siltation and other water quality effects leading to, mortality, failed recruitment, prey reduction and population decline.</p> <p>There is the potential for direct and indirect impact on Otter a listed QI species which is known to occur in the area. I note that surveys undertaken by Woodrow Sustainable Solutions Ltd. (separate to those conducted for the AA) noted evidence of otter presence, namely a number of spraint locations, in addition to a number of potential holts, recorded along the Stranagoppoge River. The potential holts were located c. 250m from the closest aspect of the proposed works (the proposed grid connection route to the south). It is</p>	<p>The proposed development has potential to give rise to minor adverse effects upon otter, as a result of potential sedimentation and pollution of the freshwater environment and also possible disturbance as a result of construction noise and associated vehicular movements.</p> <p>Mitigation measures in relation to Water Quality and Habitat Deterioration are listed under Section 7.1 of the NIS and summarised under Section 9.15 below. Following the implementation of these</p>	<p>Assessed as part of Table 5.2 of the NIS. Following implementation of mitigation no negative in-combination effects to European sites are expected.</p>	<p>Yes</p>

	<p>considered therefore that lengths of watercourse in proximity to the application site are likely to be utilised by otters for foraging and migration and the possibility of otter presence within the development area cannot be excluded. There is, therefore, potential for disturbance to the Otter populations of the area during the construction and decommissioning phases.</p> <p>The Otter population is likely to be associated with the SAC given its proximity. Potential for adverse effects in the absence of mitigation.</p>	<p>measures it is envisaged that potential impacts upon otter will be fully mitigated.</p>		
<p>Overall conclusion: Integrity test Following the implementation of mitigation, the construction, operation and decommissioning phases of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.</p>				

Table 9.4 - Derryveagh and Glendowan Mountains SPA [004039]

Derryveagh and Glendowan Mountains SPA [004039]				
Key Issues that could give rise to adverse effects:				
<ul style="list-style-type: none"> - Aerial Noise and Visual Disturbance - Displacement of SCI species <p>Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at https://www.npws.ie/sites/default/files/protected-sites/conservation_objectives/CO004039.pdf</p>				
Summary of Appropriate Assessment				
Qualifying Interest feature/s	Potential adverse effects	Mitigation measures	In-combination effects	Can adverse effects on integrity be excluded
[A001] Red-throated Diver (Gavia stellata) [A103] Peregrine (Falco peregrinus) [A140] Golden Plover (Pluvialis apricaria) [A466] Dunlin (Calidris alpina schinzii)	The proposed development will not have potential to give rise to any LSEs upon these SCI species. These species have been examined in detail under Section 8.5 of this report and the Board is asked to refer to same to avoid any repetition. These species were not recorded as utilising the proposed development site or its surrounds in any significant capacity.	None required.	Assessed as part of Table 5.2 of the NIS. No negative in-combination effects to European sites are expected.	Yes
[A098] Merlin Falco columbarius	Aerial Noise and Visual Disturbance Impact on breeding merlin from the proposed development site as a result of construction leading to displacement and resource competition with SCIs within the SPA.	Specific mitigation measures in relation to Aerial Noise and Visual Disturbance are set out under Section 7.2 of the NIS. These measures are	Assessed as part of Table 5.2 of the NIS. No negative in-combination effects to European sites are expected.	Yes - Following detailed consideration of the information submitted as part of the NIS (including mitigation), Chapter 10 (ii)

		summarised under Section 9.16 below.		of the EIAR and subsequently information supplied specifically in relation to merlin of Confidential Appendix D as part of the appeal, given the separation distances involved between the proposed site and suitable habitat for Merlin within the SPA at 6.4km (discounting Lough Finn) I am satisfied that the proposed development would not have adverse effects on the Merlin as a SCI of this SPA. The reasoning for this is presented in more detail under Section 9.16.3 below.
<p>Overall conclusion: Integrity test Following the implementation of mitigation, the construction, operation and decommissioning phases of this proposed development will not adversely affect the integrity of this European site and no reasonable doubt remains as to the absence of such effects.</p>				

Table 9.5 - Lough Nillan Bog SPA [004110]

Lough Nillan Bog SPA [004110]				
Key Issues that could give rise to adverse effects:				
<ul style="list-style-type: none"> - Aerial Noise and Visual Disturbance - Displacement of QI species 				
Conservation objectives: To maintain or restore the favourable conservation condition of QIs. Refer to conservation objectives available at CO004110.pdf (npws.ie) .				
Summary of Appropriate Assessment				
Qualifying Interest feature/s	Potential adverse effects	Mitigation measures	In-combination effects	Can adverse effects on integrity be excluded
[A140] Golden Plover <i>Pluvialis apricaria</i> [A395] Greenland white-fronted goose <i>Anser albifrons flavirostris</i> [A466] Dunlin <i>Calidris alpina schinzii</i>	The proposed development will not have potential to give rise to any LSEs upon these SCI species. These species have been examined in detail under Section 8.5 of this report and the Board is asked to refer to same to avoid any repetition. These species were not recorded to utilise the proposed development site or its surrounds in any significant capacity.	None required.	Assessed as part of Table 5.2 of the NIS. No negative in-combination effects to European sites are expected.	Yes
[A098] Merlin <i>Falco columbarius</i>	Aerial Noise and Visual Disturbance Impact on breeding merlin from the proposed development site as a result of construction leading to displacement and resource competition within the SPA.	Specific mitigation measures in relation to Aerial Noise and Visual Disturbance are set out under Section 7.2 of the	Assessed as part of Table 5.2 of the NIS. No negative in-combination effects to European sites are expected.	No - Following detailed consideration of the information submitted as part of the NIS (including mitigation), Chapter 10 (ii)

		<p>NIS. These measures are summarised under Section 9.16 below.</p>		<p>of the EIAR and subsequently information supplied specifically in relation to merlin of Confidential Appendix D as part of the appeal, I am still not satisfied that the proposed development would not have adverse effects on the Merlin as a SCI of this SPA. The reasoning for this is detailed under Section 9.16.4 below.</p>
<p>Overall conclusion: Integrity test Following the implementation of mitigation, it is still not possible to definitively conclude without reasonable doubt that this proposed development will not adversely affect the integrity of this European site.</p>				

9.14. In-combination Effects

- 9.14.1. Section 5.4 of the NIS specifically relates to in combination effects with other plans and projects. Plans identified include European level directives such as the Nitrates Directive, National Plans such as the NPF, National Biodiversity Plan, the IFI corporate plan and local plans such as River Basin Management Plans and the Donegal County Development Plan (2018-2024). There are no planning applications approved or pending in close proximity to the proposed development, however there are a number of planning applications approved or pending within the sub-catchment in which the proposed development is located. The applications are for the extension, renovation and construction of dwellings, in addition to other agricultural permissions and no in-combination impacts are expected.
- 9.14.2. Other projects identified include wind farms in the vicinity, of which a total of 26 were identified in Donegal. Each of these wind farm developments has been assessed in light of their potential to give rise to significant impacts upon birds associated with SPAs within their respective Zols. The NIS states that ‘given the findings of bird surveys undertaken in association with the proposed development and the resultant rationale given at Section 5.3.4 of that document, it is considered that there is no potential for in-combination effects when considered alongside other wind farm projects in the Zol and beyond’. In addition to windfarms, active quarries and interaction with agriculture and forestry activities are also considered.
- 9.14.3. I am satisfied that the mitigation measures set out below will adequately address any potential in-combination effects. It can be reasonably concluded in my opinion that no residual in-combination effects will result from the proposed development.

9.15. Test of Effects and Mitigation Measures

- 9.15.1. The following outlines the proposed mitigation measures (as referenced in Table 9.2 to 9.5 above) in respect of the potential identified adverse effects upon the integrity of the European Sites which may arise as a result of the proposed development via the identified impact pathways namely through water quality and habitat deterioration effects and aerial noise and visual disturbance. Details in relation to these mitigation measures are provided under Section 7 of the NIS.

Water Quality and Habitat Deterioration

Soil Excavation, Storage and Re-use

9.15.2. Mitigation measures in relation to soil excavation, storage and re-use are detailed under Section 7.1.1 of the NIS. These measures include those listed in the CEMP - Chapter 6 which outlines measures to be implemented during earthworks at the site and this is supplemented by CEMP attachments 2 and 3 which address road construction and peat management respectively. An Environmental/Ecological clerk of works (ECoW) will be appointed for the duration of the construction project, who will monitor the environmental aspects of construction (soil storage, peat stability, day-to-day excavation works, etc.) and instruct the contractor to implement additional mitigation measures, if deemed appropriate. In addition, inspections of the excavation works (rock cuts, peat) will be carried out by suitably qualified and experienced geotechnical personnel and where necessary micro-siting (20m lateral and 3m vertical) will be allowed for geotechnical purposes once the turbines don't come any closer to the closest stream. To control contaminated run off and siltation, earthworks will be suspended during extreme weather conditions and excavation will be carried out from access roads, where possible, in order to reduce soil compaction. Machinery will stay within the works corridor, as set out, so that compaction of soils outside the works area is avoided. Peat / soil / rock will not be stockpiled on areas with slopes $>5^\circ$ or in areas with peat depth greater than 1m. Any dewatering of excavations will be controlled and drained to drainage channels via silt traps.

General Protection of Surface Waters Mitigation

9.15.3. Additional measures will be implemented in order to address the potential for sediments and contaminants to enter the freshwater environment. These are listed under Section 7.12 and include best practices to be employed during construction works to minimise the release of sediment laden storm water runoff. Works on stream crossings will be carried out in dry weather and as far as practical when low flows occur in the streams / drains. Shallow cut-off drains or temporary plastic diversion barriers will be installed, and areas stripped of vegetation will be kept to a minimum, where felling is necessary this will be carried out using a keyhole method. Stockpiled soils will be kept a minimum distance of 50m from any watercourse and

silt fences will be placed downgradient of stockpiles to treat any polluted runoff. Drainage swales will be constructed at track edges, as necessary, with discharge to existing forestry drains for sections of road within forestry. Drains will be culverted under roads using suitably sized pipework and streams will be crossed with bottomless (clear span) structures. Appropriately constructed check dams and or straw bales will be installed along the alignment of roadside drainage to slow flows and remove silt. The release of cement to water courses will be prohibited and concrete pours will occur in contained areas, using shuttering and rinsing down of concrete trucks will be done at dedicated locations on site. Hydrocarbons (oils, diesel and chemicals) will be stored and managed in an appropriate manner to ensure no negative impacts. Refuelling of mobile plant will not take place within 50m of any sensitive receptor and toolbox talks on the process will be given. Measures will also be put in place to manage any debris on the public roads. Clean surface water runoff will be diverted around earthworks areas, and this will be done with the use of diversion barriers/channels (e.g. HDPE or LDPE). Silt fences will be erected on the downslope side of any earthworks. Settlement ponds will be used at the turbine locations and water will be pumped from the foundation excavation or runoff from the works area will be directed to a settlement pond to remove silt.

- 9.15.4. In case of worse-case scenario where there is a release of silt-laden water during construction into the streams draining the site an emergency response plan has been formulated and the procedures of same will form part of the Site-Specific Health & Safety Plan.

Additional Mitigation Measures for FWPM

- 9.15.5. Mitigation measures specifically related to FWPM are outline on pages 76 and 77 of the NIS, in addition these measures have also been previously discussed under Sections 8.5.21 to 8.5.37 of this report under the section on EIA. In summary the specific mitigation measures listed include:

- Suitably qualified ecologist experienced in the requirements of the FWPM to be present on site throughout initial stages of implementation of the site mitigation measures, silt trap erection, spill preventative measures etc.

- Regular checks to be undertaken by an experienced ECoW to ensure the management measures stipulated in the CEMP for the protection of the FWPM and its habitat are being implemented by the contractor.
- Toolbox talks specific to FWPM and its habitat.
- Multiple mitigation measures in terms of preventing silt release at source shall be employed with detailed design, placement and maintenance of such measures to be carried out in close consultation with ECoW and where necessary the NPWS and IFI.
- Monitoring of silt traps both during and after construction operations have been completed to ensure that silt does not enter the watercourse.
- Before completion of all sites works the site agent or foreman must ensure that a thorough check of the site is carried so that that any mitigation measures deemed necessary to prevent negative impacts can be implemented before completion of works.

9.15.6. Although not specifically a mitigation measure the applicant also proposes regular contact with NPWS rangers to ensure the requirements of the FWPM and all interested parties are being met.

Proposed Grid Connection: Watercourse Crossings Mitigation

9.15.7. Watercourse crossings associated with the proposed grid connection route, will either utilise a trenching method, in line with that proposed from the roadbed itself; will involve an undercrossing which in many cases will require the replacement of the existing culvert structure; or will require HDD operations. Specific mitigation measures in relation to general watercourse crossings are outlined under Section 7.1.3 of the NIS with any works to be supervised by the ECoW and / or the project aquatic ecologist who will liaise with IFI and NPWS prior to works commencing. Specific measures in relation to culvert types and placement (embedding) and temporary fluming or flow division and measures for fish rescue or translocation where salmon are present are also outlined. Any works within watercourses that have the potential to support fish will be avoided between Oct 1st and April 30th as per IFI and Loughs Agency guidelines. Sandbagging and procedures for carrying out sandbag damming are also outlined.

Proposed Grid Connection: Horizontal Directional Drilling Mitigation

9.15.8. The proposed procedures envisaged in relation to HDD and mitigation measures specific to same are outline under Section 7.1.4 of the NIS. The proposed grid connection route will involve HDD operations in three locations in order to facilitate delivery of the GCL. These methods have already been discussed previously under Section 8.5 of this report (EIA). I note the Department's submission and their specific concerns in relation to the possible impacts of HDD on water quality and in particular the resultant impacts on FWMP. Section 7.1.4 of the NIS details that it is envisaged that these works which will include for launch and receptor pits at least 25m either side of the watercourse to be crossed, have relatively limited potential to give rise to significant sedimentation or other water quality impacts, and are likely to comprise the most effective solution for crossing these watercourses whilst minimising potential for water quality effects. Specific mitigation measures are nonetheless presented in the event that a 'break out' or 'frac-out' may occur and this is detailed within Attachment 6 to the draft CEMP (Appendix III). In particular, a Frac-Out Mitigation Plan (to be finalised on appointment of contractor) has been prepared as part of the construction methodology and a sample frac-out plan is provided at Appendix B to Attachment 6. At each HDD crossing, a geo-technical investigation will be undertaken to determine the porosity of the underlying stream bed and to locate a suitable clay/ silt formation so that the risk of drilling mud break out can be ascertained. The depth of the bore may be increased subject to the investigation. Spatial buffers and sediment traps/ booms are also to be implemented and it is noted that the measures set out above in respect of general protection of surface waters, such as bunding of fuel storage and other material storage, remain relevant to HDD also.

Operational decommissioning phase mitigation

9.15.9. At operational stage appropriate bunding of the fuel storage tank (1,300 L) will be required.

9.15.10. The proposed project at decommissioning stage has potential to give rise to a similar set of impacts as associated with the construction stage and therefore the applicant states under Section 7.1.6 that they intend to implement mitigation measures as set out above in respect of construction in association with decommissioning where relevant. Any reinstatement works proposed (i.e.

reinstatement of turbine foundations) will be undertaken in line with the mitigation measures set out within the appended CEMP.

Conclusion

9.15.11. In summary having examined the submitted information and supporting documentation, I am satisfied that the measures set out above in respect of the potential for water quality and habitat deterioration effects associated with a range of aspects of the proposed development are considered to fully mitigate any potential adverse impacts upon freshwater qualifying interests of the West of Ardara/Maas Road SAC and River Finn SAC.

9.16. Test of Effects and Mitigation Measures in relation to Ornithology

9.16.1. The Board will note that an assessment of the impact of the development on merlin was previously undertaken in Sections 8.5.80 to 8.5.87 (EIA) of this report above and that major concerns in relation to the impact on same were highlighted. Two SPAs are present within the ZOI of the proposed scheme, namely the Derryveagh and Glendowan Mountains SPA and Lough Nillan Bog SPA. The site boundaries of these SPAs are located 2.4km and 1.7km from the proposed development boundary respectively. Section 5.3.3 of the NIS states that on the basis that these SPAs are separated from the proposed development by significant areas of upland habitat and given the relative levels of disturbance which are likely to arise during construction, it is considered that there is no potential for the proposed development to give rise to disturbance upon any nearby SPA directly through aerial noise and visual disturbance during construction or operation. Having examined the submitted information I would concur with the applicant's opinion in this regard, however, as set out under Tables 9.4 and 9.5 above the proposed development has potential to give rise to indirect adverse impacts upon the Lough Nillan Bog SPA and Derryveagh and Glendowan Mountains SPA through aerial noise and visual disturbance to merlin breeding in proximity to the site, which in turn have the potential to give rise to displacement of the breeding pair potentially leading to resource competition, including nest site competition within the SPAs.

9.16.2. As previously mentioned under Section 8.5.80 a single pair of breeding merlin nests were recorded in both 2019 and 2020 within close proximity to the proposed

development site (the locations of these nest sites are illustrated on Map1 of Appendix 7 (Confidential Appendix in Volume 3A) and the merlin pair successfully fledged young in both years. Survey results from 2021 showed that there was no repeat use of these nests for that year. It is noted that merlin was also encountered, though less frequently, during non-breeding season (September 2020).

9.16.3. The NIS acknowledges that the recorded breeding pair of this species is likely to be vulnerable to aerial noise and visual disturbance at the construction stage of the proposed development, given the proximity of the nesting locations utilised by this pair to the site. The recorded nesting locations were situated c.3.1km and c.3.3km respectively, from the closest part of the Derryveagh and Glendowan Mountains SPA, however the NIS is careful to highlight that these distances are to the nearest part of the SPA, that being Lough Finn, which is separate from the remainder of the SPA and inclusive of the lake area only, which does not offer suitable habitat to support nesting merlin. The distance from the nesting sites to the nearest point of the SPA with potential to support breeding merlin, that being the main block of the Derryveagh and Glendowan Mountains SPA is in fact 7.1km and 7.3km respectively, thus outside of the range for merlin which is from 3km to 6km according to Norris et al. 2010. The NIS states that it is therefore considered that the nesting pair of merlin within proximity to the site, do not comprise a portion of the 6-11 pairs which form SCIs of the Derryveagh and Glendowan Mountains SPA. In considering this information it is important to note the actual distance of the nearest proposed wind turbine from the SPA boundary. T1 is in fact located c. 6.4km south of the nearest area of suitable habitat for breeding/foraging merlin within the SPA (this excludes Lough Finn). Having considered this separation distance and also the availability of upland habitat between the proposed site and this location, I am satisfied based on the available information that the nesting merlin recorded in the 2019 and 2020 surveys are not associated with the SPA population given their maximum foraging range at 6km and therefore that any adverse impacts on the site integrity of Merlin SCI associated with the Derryveagh and Glendowan Mountains SPA can be ruled out.

9.16.4. In respect of Lough Nillan Bog SPA, the closest point of the proposed development (grid connection works to southwest of site) and the SPA is 1.7km. The 2019 and 2020 nesting locations were 5.2km and 5.1km respectively from the SPA boundary

at its closest point. The NIS states that on this basis it is considered possible that the pair is rarely present within the SPA boundary, but this is relatively unlikely given the spatial separation which is approaching the maximum estimated territory size of 6km (with mean territory around 3-4km (Lusby et al. 2010, Rebecca et al. 1992) with Hardley et al. (2009) reporting a range of 0.5- 4.5 km between nesting territories). Having considered the information submitted as part of the NIS and the confidential information contained within Confidential Appendix D to the appeal, as stated previously under Section 8.5 of this report I am not satisfied with the argument presented by the applicant, nor do I believe it can be concluded without any reasonable doubt that this SPA's SCI will not be impacted. Taking into account the following:

- 1. The foraging range of merlin species at c.5km (SNH (NatureScot) (2016)¹³),
- 2. The actual separation distance from the nearest proposed turbine (T8) to the SPA boundary at c. 3.3km and to a lesser extent disturbance that may occur from the construction works involved for the grid connection works at 1.7km north of the SPA boundary,
- 3. The prevalence of the area for raptor species as evidenced in the submitted flight path analysis and records submitted in support of both the NIS and EIAR, &
- 4. The possibility that the previously recorded pair close to the site (nests recorded in 2019 and 2020) carry a significant risk of potential displacement of other breeding pairs within both the Lough Nillan Bog SPA,

I would conclude that the risk for adverse effects on these SCI populations cannot be definitively ruled out, nor is there in my opinion sufficient scientific evidence to prove the contrary. In addition and also as highlighted previously, I note the applicant's reference under Section 10.(ii).103 of the EIAR which identifies specific risk of disturbance to, or displacement of, the merlin pair breeding at the windfarm site and states that this is likely to put pressure on neighbouring pairs in terms of nest site and home range competition. This conflict is also highlighted in the submission received from the Department.

¹³ SNH (2016) Assessing Connectivity with SPAs Guidance (Version 3).

9.16.5. As previously discussed under Sections 8.5.84 and 8.5.85 of this report (EIA Section) it has been acknowledged that the works corridor for the wind farm is considered to be within the foraging range of breeding merlin and therefore it can be assumed that there will be a level of disturbance during construction works that may cause displacement, thus even if the pair nesting close to the site do not form part of the Lough Nillan Bog SPA population (and I stress that this has not been scientifically proven by the applicant), they may in fact cause displacement of the SPA population, the site boundaries of which are in close range c. 5.1 south of the nest sites. In addition, I note that no comprehensive survey data has been submitted regarding possible nest sites or foraging areas within the Lough Nillan Bog SPA. As stated previously the designated site's boundary is at its closest point 1.7km from the proposed infrastructure works and the nearest turbines, T8 and T7 are located c. 3.3km and 3.7km from the SPA boundary respectively. Therefore based on the submitted information it cannot be determined beyond reasonable scientific doubt that the merlin that represent SCI species of the Lough Nillan Bog SPA that may forage in the area to the north of the SPA would not be adversely impacted by the proposed development.

9.16.6. In relation to operational phase impacts, potential collision risk and disturbance have been discussed previously under Section 8.5.86 (EIA). Merlin recorded on site principally utilised flight-lines outside of a 500m buffer surrounding the proposed turbine locations and a CRM result of 0.73 collisions every 30 years, in a worst-case scenario (N133 Turbines) was predicted. The NIS states that this risk is considered to be not significant as it would indicate no collisions will occur over the lifetime of the project. Mitigation measures to minimise construction phase aerial noise and visual disturbance effects upon birds and merlin specifically are outlined under Section 7.2 of the NIS, these include i.e. restriction of fencing on site, timing of vegetation clearance and construction works to avoid bird nesting season, supervision of works by a suitably qualified ornithologist/ECOW, and also more specifically the provision that if any merlin nests are found during construction works a 500m buffer zone will apply where all works will only be permitted outside of bird breeding season. In addition, no construction will be permitted within 500m of the merlin nesting location identified during the baseline surveys. At decommissioning the same mitigation

measures as set out above in respect of the construction phase will be implemented, as directed by an ECoW.

9.16.7. Notwithstanding the mitigation measures proposed, following the AA and consideration of these mitigation measures, I am unable to ascertain with confidence or beyond reasonable doubt that the project would not adversely affect the integrity of the Lough Nillan Bog SPA, for reasons in relation to possible aerial noise and visual disturbance effects from the proposed development on merlin species and subsequent effects associated with displacement of merlin upon the Lough Nillan Bog SPA in view of their Conservation Objectives.

9.17. **Appropriate Assessment Conclusion**

9.17.1. The proposed Graffy Windfarm has been considered in light of the assessment requirements of Sections 177U and 177V 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 West of Ardara/Maas Road SAC (000197); River Finn SAC (002301), Lough Nillan Bog SPA (004110), and Derryveagh and Glendowan Mountains SPA (004039). Consequently, an Appropriate Assessment was therefore required of the implications of the project on the qualifying features of those sites in light of their conservation objectives.

9.17.2. Following an Appropriate Assessment, and the consideration of mitigation measures, it remains that I am still unable to ascertain with confidence that the project would not adversely affect the integrity of the Lough Nillan Bog SPA in view of this site's Conservation Objectives which seek to maintain or restore the favourable conservation condition of merlin as a bird species listed as SCI for these SPAs. Therefore, it cannot be ascertained that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of European site Nos. 004110, in view of these sites' Conservation Objectives. These issues have already been raised with the applicant and an opportunity given for response by means of the current appeal. The issues remain unresolved and documentation on file is insufficient. In these circumstances I consider that the Board is precluded from granting permission and there is no alternative other than to

recommend refusal of permission for the reasons and considerations set out under Section 12 below.

10.0 Planning Assessment

10.1. Introduction

- 10.1.1. This final stage in the assessment considers the proposed development in the context of EU, National, regional and local planning policy, as well as the development and legal context. Environmental matters, including the impacts of the proposed development on the residential and visual amenities of the area, traffic, water quality, noise, shadow flicker, biodiversity and other matters, are all considered as part of the EIA undertaken in Section 8 of this report. An appropriate assessment of whether or not the project would be likely to have a significant effect on the integrity of European sites, either individually or in combination with other plans and projects, is undertaken in Section 9 of this report.
- 10.1.2. This is a first party appeal against the Council's decision to refuse the proposed development for 5 no. reasons, including reasons of prematurity pending the adoption of the new wind guidelines and variation to the Donegal County Development Plan, reasons in relation to scenic landscape including the designation of the subject site within an area of 'Especially High Scenic Amenity' (EHSA), and also reasons in relation to inadequate information in relation to the possible impacts that the proposed development may have on FWPM, Merlin, White-tailed eagle and Golden eagle.
- 10.1.3. I have read the entire contents of the file, visited the site and surroundings, and have had particular regard to the national and local policy in respect of the wind farm development. I have also had regard to the submissions contained on file including the submissions of the various third-party observers, prescribed bodies and submissions from Donegal County Council. All three sections of this report (EIAR Assessment and the Appropriate Assessment and Planning Assessment) should be read in conjunction so as to avoid unnecessary repetition under each of the sections.

10.2. Compliance with Climate Change and Energy Policy

- 10.2.1. The policy context for the proposed development in relation to renewable energy and climate change is set out in Section 6 above and within the application, including Chapter 2 of the EIAR, as well as the application and appeal submissions. There is a positive presumption in favour of renewable energy projects at National, Regional and Local levels.
- 10.2.2. The proposed windfarm would be compatible with European and national climate change and renewable energy policies as summarised in Section 6 above. It would contribute to the achievement of European and national renewable energy targets, and in particular the objectives of the Climate Action Plan (2021) which seek to realise a 51% reduction in overall greenhouse gas emissions by 2030, setting us on a path to reach net-zero emissions by no later than 2050. Among the most important measures in the plan is to increase the proportion of renewable electricity to up to 80% by 2030. Section 17 of this Plan also identifies a range of measures to deliver targets for a reduction in greenhouse gas emissions including the better management of peatlands, whilst other practical issues related to peatland management (including soils, hydrology, biodiversity, peat stability & bog rehabilitation) which have already been addressed in the relevant sections of the EIA section of this report.

National and Regional Planning Policy and Guidance

- 10.2.3. The proposed windfarm would be compatible with national planning policy as set out in the National Planning Framework 2018-2040 which recognises the need to move toward a low carbon and climate resilient society with a sustainable renewable energy supply. The 2006 Wind Energy Development Guidelines (and 2019 Draft amendments) advise that a reasonable balance must be achieved between meeting national policy on renewable energy and the proper planning and sustainable development of an area. The Guidelines also state that projects should not adversely affect any European sites, have an adverse impact on birds, give rise to peat instability or adversely affect drainage patterns, cultural heritage, sensitive landscapes, the local road network or residential amenity. These practical issues have been addressed in detail in the relevant sections of the EIA and AA sections of

this report. Landscape considerations are examined further under Section 10.3 below.

- 10.2.4. The proposed windfarm would be compatible with regional planning policy as set out in the Regional Spatial & Economic Strategy for the Northwest Region 2020-2032 which seeks to facilitate the sustainable development of additional electricity generation capacity throughout the region and to support the sustainable expansion of the transmission network.

Compliance with Local Planning Policy

- 10.2.5. The proposed windfarm would be compatible with the general climate change and renewable energy policies and objectives of the operative Donegal County Development Plan 2018-2024, and in particular Policy CS-O-17 which seeks to promote sustainable development, including measures to reduce energy demand and greenhouse gas emissions, and adapt to climate change.
- 10.2.6. However, it should be noted that following a Judicial Review under 2018/533 (JR Planree Ltd. v Donegal County Council) certain sections of the Wind Energy standards at Part B: Appendix 3, Development Guidelines and Technical Standards and Map 8.2.1 were ordered to be deleted and/or removed from the County Donegal Development Plan 2018-2024. Although Policy E-P-12 states that the Council seeks to consider the development of appropriate new wind energy developments in areas identified in Map 8.2.1, the ordered deletion and/or removal of Map 8.2.1 renders this policy un-implementable. Therefore, the Development Plan does not contain any policies, objectives or standards for the preferred geographical location of windfarms (other than those listed in Section 6.5 of this report above which continue to protect Glenbeigh National Park, Donegal Airport, FWPM catchments and European sites).
- 10.2.7. Refusal Reason no.1 of the planning authority's decision to refuse to grant permission for the proposed development was based on the opinion that following this recent High Court judgement (2018/533), alongside the absence of updated National guidelines for wind energy, the planning authority were unable to comprehensively assess the subject wind energy proposals.
- 10.2.8. While I note the comments in the submitted appeal in which the applicant believes that precedent has been set by the Board on these matters, where for example permission for windfarm developments has previously been approved despite the

planning authorities refusal reasons based on a lack of sufficient policy, I would highlight that regardless of precedent, each application must be assessed on its own merits and also its compliance with other policies and objectives within that the operative Development Plan. The Donegal County Development Plan 2018-2024 contains a plethora of policies and objectives which seek to protect the environment, European sites, biodiversity, scenic landscapes, views, residential amenity and cultural heritage, all of which require consideration as part of this application. A significant number of these have already been considered within the relevant EIA and AA Sections of this report and same should be referred to. Therefore, to refuse permission for the proposed development based on a perceived inability to adequately assess wind energy developments with regard to planning policy and guidance would not be warranted, and having regard to the nature and scale of the proposed development, it is considered that the proposed development would facilitate and support the achievement of European and National renewable energy and climate change policies.

10.2.9. In conclusion, having regard to the policies and objectives of the operative CDP and the national guidelines and notwithstanding the judgement in relation to JR Planree Ltd v. DCC, I am satisfied that there is sufficient guidance, planning policy and legal context to allow for a reasonable, fair and appropriate determination in relation to the acceptability of the proposed development for this site. Based on the foregoing I consider the principle of the development to be acceptable, in that it is supported by the relevant renewables policy, however this is obviously on the provision that that it does not adversely impact on the natural environment, visually sensitive landscapes, the amenities of the area or on local residents. These considerations are examined further in the sections that follow and Sections 8 and 9 above of this report.

10.3. **Landscape and Visual Impact**

10.3.1. The impact on landscape character, designated areas of scenic amenity and the overall visual impact of the development on the surrounding area is one of the most significant issues associated with this proposal. The physical extent of the visual influence of the turbines and their impact on the natural landscape character represent the principal issues of concern. The Board will note my comprehensive assessment of the environmental effects of the proposed development in terms of

landscape and visual impacts under Section 8.3 (EIA). I do not propose to repeat that assessment here and instead focus on the policy compliance; however, this current section should be read in conjunction with Section 8.3 in order to inform the Board's decision.

- 10.3.2. I note reference in the observations received on appeal to the previous applications made in January 2021 (DCC Ref.21/50107) and later that year in June 2021 (DCC ref. 21/51202), both of which were subsequently withdrawn. The observations state that the planning application was incorrectly described by the applicant as “an amended application” with reference to these previous planning applications. As stated in the planning authority's report on file it is set out that there is a material change in consideration of the development proposal on the basis that there is no longer an extant permission on the subject site, which the planning authority state is only to be relied upon for a repowering or amended proposal, and further that the lands are currently zoned as Especially High Scenic Amenity (EHSA). The planning authority stress that the previous permission (P.A. ref. 09/30520 and ABP Ref: PL 05B.237656) was assessed where the land use designation was of a lesser scenic category.
- 10.3.3. In the second refusal reason the planning authority state that they consider the proposal would result in a considerable and unacceptable adverse visual impact upon this upland environment designated as an “EHSA” area. The appellant has requested the Board to overturn this second reason for refusal and outlines that it is their belief that Policy E-P-12 (c) of the development plan positively supports the reapplication of a wind farm development in this area deemed “Acceptable for Augmentation”, while also noting that the area is designated as an Area of EHSA. The appellant states that wind turbines do not constitute a considerable and unacceptable adverse visual impact within the particular location which is designated as EHSA.
- 10.3.4. At this juncture, it should be noted as outlined under Section 6.5.16 and 6.5.18 (Policy Context) of this report above, that the Donegal County Development Plan 2018-2024 has been subject to a variation in respect of the Wind Energy Policy

Framework. This variation came into effect on 18th July 2022¹⁴ (at the time of writing this report) and therefore the revised policy framework should be considered. It should however also be noted that the adopted variation is at odds with the recommendations made by the Office of Planning Regulator (OPR) and as a result the Planning Authority has now notified the OPR as it is required to do under Sections 13(5)(aa) and 31AM(6)(a), therefore the official outcome in relation to this variation is currently unknown. Taking this into consideration and so as to allow the Board to be fully informed I have firstly examined the appeal as per the policy which was relevant at the time of the appeal and then secondly, I have noted the changes in policy under Section 10.3.9 below. When examining the initial Policy E-P-12 (c) I have referred to it as the 'original' policy. When examining the appeal in relation to the amended policy, as I have under Section 10.3.9, I have referred to it as the 'amended policy'.

10.3.5. To begin with the details appealed, while I note the provisions of original Policy E-P-12 (c) in relation to repowering/amendment proposals, I do not consider these provisions applicable in the case of the current proposal given that there is no longer an extant permission for a windfarm development on the subject site. Original Policy E-P-12 states that it is a policy of the Council to “consider the augmentation, upgrade and improvements of existing (note underline, my emphasis added) windfarm developments within areas identified as ‘Acceptable for augmentation of/improvements to existing windfarms’ on the Wind Energy Map 8.2.1 on a case by case basis subject to compliance with other relevant objectives and policies contained within this plan and the following.... (c) Reapplication “In areas located outside of Natura 2000 sites, where an existing wind farm has been permitted and this permission has expired, a revised proposal will be considered within the planning unit of the previously permitted development, and where it is demonstrated that there is no net increase in turbines”.

10.3.6. Firstly, I would like to highlight to the Board that Wind Energy Map 8.2.1 was removed from the plan as a consequence of High Court Order (2018/533JR), therefore the validity of this policy is questionable. Secondly, technically two areas of

¹⁴ [https://www.donegalcoco.ie/media/donegalcountyc/planning/pdfs/planningpolicy/cdp2018-2024-windenergypolicyframework/Variation%20to%20CDP%202018-2024%20\(As%20Varied\)%20re%20WEPF%20as%20duly%20made%2018%2007%202022.pdf](https://www.donegalcoco.ie/media/donegalcountyc/planning/pdfs/planningpolicy/cdp2018-2024-windenergypolicyframework/Variation%20to%20CDP%202018-2024%20(As%20Varied)%20re%20WEPF%20as%20duly%20made%2018%2007%202022.pdf)

the proposed site are located within Natura 2000 sites (West Of Ardara/Maas Road SAC and River Finn SAC). And thirdly I note that the previous permission on site expired in February 2021 following a 10 year permission (ABP PL 05B.237656) and therefore there is no “existing” windfarm on site. In addition, in relation to “Reapplication” the original policy states revised proposal will be “considered”, this does not guarantee a grant of permission in these cases. The applicant’s reliance on Policy E-P-12 therefore in my opinion does not validate the overturning of refusal reason no.2.

10.3.7. At this juncture it is also important to reiterate that the landscape zoning on the subject lands at the time when the previous application on site was granted in 2011 differed from that currently in place. The subject site at the time was located within an area previously designated as ‘Normal Landscape’, under the Donegal County Development Plan (DCDP) 2006-2012 where different policy applied. The area designation was subsequently changed under the DCDP 2012-2018 to EHSA and this designation has remained in place under the operative Development Plan (2018-2024). While I acknowledge that this previous development may have been constructed on site up until its expiration of permission in February 2021, this has no bearing on the current assessment as what is now proposed is a development of significantly larger turbines, albeit less numerous, within an area which now has a more stringent landscape protection.

10.3.8. Section 7.1 of the operative CDP defines Areas of EHSA as “*sublime natural landscapes of the highest quality that are synonymous with the identity of County Donegal. These areas have extremely limited capacity to assimilate additional development*”. Policy NH-P-6 of the operative CDP states that “*It is a policy of the Council to protect areas identified as Especially High Scenic Amenity on Map 7.1.1: ‘Scenic Amenity’. Within these areas, only developments assessed to be of strategic importance or developments that are provided for by policy elsewhere in this Plan shall be considered*”. The eight proposed turbines are to be located entirely within an area designated as EHSA, and therefore Policy NH-P-6 applies in this case. While the planning authority in their assessment acknowledge that the policy allows for consideration of development proposals of a strategic nature on lands designated within EHSA, they also state that a balance has to be reached between these types of development and protection of the scenic amenity value of the EHSA designated

lands. In this regard the planning authority consider the proposal has the potential to adversely impact on the scenic amenity value of the designation and would therefore be contrary to Policy NH-P-6. I would be in full agreement with the planning authority on this matter, in particular when considering the other policies and objectives which also highlight the importance of protecting these areas. These include Policies NH-P-13 and NH-P-16, which are closely related with Policy NH-P-6 in that they state that all development must be considered in the context of the landscape classification contained within the Plan and as illustrated on Map 7.1.1: Scenic Amenity. Objective NH-O-7 further emphasises the importance of areas of EHSA stating that these areas must be protected “*from intrusive and/or unsympathetic developments*”.

10.3.9. At this juncture and as referred to under para. 10.3.4 above, the amendments to Policy NH-P-6 as introduced as part of the most recent variation (made on 18th July 2022) should also be considered. This amended policy retains the specific protection afforded to areas identified as EHSA stating as before that within these areas, only developments assessed to be of strategic importance or developments that are provided for by policy elsewhere in this Plan shall be considered. It also states the following “*Without prejudice to the generality of the aforementioned, windfarm developments will not be acceptable in Especially High Scenic Amenity Areas save for:*

(i.) *the limited circumstances set out under the section headed: ‘Wind Energy-Context’ (para. commencing: ‘Map 8.2.1 entitled Wind Energy designates....’), contained within Amendment No.4 above; and*

(ii.) *the possible exceptions set out in Policy E-P-12(1)(c)(ii.)”* Having considered the above I can confirm that neither limited circumstances or exceptions would apply to the current proposed development. In particular I note that amended Policy E-P-12(1)(c)(i) clearly outlines that 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. This is the case for the current proposal. Amended Policy E-P-12(1)(c)(ii) refers to “*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*” and clearly the proposed development does not fall into any of these categories. The board is again reminded that the prior

permission for a windfarm on site expired in February 2021. In essence, the variation has in fact strengthened the protection afforded to EHSA in relation to windfarm development.

10.3.10. Regarding the remaining elements of the proposal i.e., grid connection cable works and the connection to the Eirgrid Station Tievebrack, these works are located within an Area of High Scenic amenity (HSA) – for these areas the plan states “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”. I do not consider the proposed works involved within the HSA area will result in any significant negative impact on the landscape, nor would it be contrary to development plan policy NH-P-7 which applies to the area.

10.3.11. In addition to the above policy, in relation to scenic amenity and designated scenic areas the operative CDP also contains development guidelines and technical standards for wind energy developments which are also applicable to the current appeal. These are outlined in original Section 6 of Part B to Appendix 3 of the Plan. Notwithstanding the deletion of parts (c) and (f) on foot of the High Court Order (2018/533JR), the remaining provisions within this section remain and still requires that “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, (d) Special Areas of Conservation (SACs) nor Special Protection Areas (SPAs) and (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”. In case of the current proposal as outlined under Section 8.3 of the report above neither the ZVI of Donegal airport or Glenveagh National Park will be impacted, though I do note that parts of the proposal will be visible from more remote elevated areas to the

southwest of the national park. With regard to (d) and (e) these are assessed in more detail under Section 8.5 and under the AA in Section 9. It should be noted that under the Variation Part B: Appendix 3, Development Guidelines and Technical Standards, 6.5 Wind Energy Page 197 has been deleted.

Conclusion

10.3.12. Having visited the proposed site, I can confirm that the resultant impact of this proposed development would be to change the understanding of the landscape and in my opinion the development would impact negatively on the visual qualities of the area. Given the location of the proposed turbines, the incongruity that would result from the development on the natural landscape could not be avoided. I believe the planning authority's concerns relating to impacts on the landscape and the Especially High Scenic Amenity designation of this area are well-founded, and I consider that the proposal conflicts with the provisions of the Donegal County Development Plan 2018-2024 as they relate to the protection of such designated areas, in particular with Policy NH-P-6 (original and as amended under Variation), and therefore the development should be refused on this basis.

10.4. **Gaeltacht**

10.4.1. The impacts of the development on the cultural and linguistic heritage that the Gaeltacht provides has been raised in several submissions received on the appeal. The observers claim that no impact assessment has been undertaken on the affect the development will have on the cultural and linguistic heritage that the Gaeltacht provides in this area.

10.4.2. The Donegal Gaeltacht, covering a third of the County and encompassing an area of 1502km² is the second largest of the seven Gaeltacht areas in Ireland. According to Map 11.1 of the operative CDP the subject site is within the defined Gaeltacht area. Various policies and proposals are incorporated into the Plan to preserve, protect and promote the language and culture of the Gaeltacht, whilst at the same time allowing it to develop. Policy CCG-07 in particular states that the Council seek to "promote, protect, harness and sustainably develop the Culture of Donegal by inter alia: Recognising and protecting the landscape and built heritage of Donegal as key elements of our culture". The Plan does not identify particular land uses, which it is

considered could pose a threat to the language and culture of Gaeltacht areas requiring language impact assessment. I also note that the Windfarm Development Guidelines 2006 and the Draft Guidelines 2019 also make no reference to negative impacts on language arising from wind farm development. Some observers raised concerns relating to the depopulation of the area and loss of attractiveness due to the development of a wind farm. Whilst substantial and persistent population decline would impact significantly on the ability of the area to support and maintain the facilities/activities to sustain and promote the Irish language, I am not aware that there is any compelling evidence that appropriately sited wind turbines would result in population decline or render an area less attractive for housing. The area in which the wind turbines are proposed is an area with a very low population density. The few inhabited houses that do exist are long established residences and there is no evidence, even in the absence of the proposed windfarm, that the area has proved an attractive location for new dwellings for native Irish speakers. I therefore conclude that the proposal would not have any significant negative impact on the ability of the area to attract future Irish language speakers in the future.

10.5. Other Matters

Meteorological Mast

- 10.5.1. Eirgrid's requirement for detailed and reliable data signals to provide high quality forecasting to maintain system security, necessitated the inclusion of a permanent meteorological mast in the project. The proposed mast will be a free-standing structure, 80m high and shall be sited in the location of the existing temporary stay-supported meteorological mast, which was erected to confirm the feasibility of the site before detailed work was undertaken. I do not consider that the inclusion of the permanent meteorological mast will give rise to concerns, as it is to be located at the site of the temporary mast and will be a similar height.

Ownership Issues and landowner consent

- 10.5.2. The ownership of part of the site is contested by Mark Devery, who claims that a parcel of land in the Drinagh area (identified on a submitted map), which is unregistered is in the ownership of Mark Devery and John Devery. The applicant's rebuttal claims that all the lands within the application boundary have received the

appropriate consent from landowners. It is clearly not within the scope of the Board to adjudicate on matters relating to title or land ownership, which are not planning matters. These are civil matters which are more appropriately dealt with through the courts and therefore shall not be considered further by the Board as part of this appeal.

Installation of HV cable on public road

10.5.3. I note the advice note attached to the planning authority's decision with regard to the installation of the HV cable along the local road. Matters in relation to the installation of this cable and any subsequent environmental issues that may arise as a result, as well as relevant mitigation measures required have already been outlined under Section 8.10 of the EIA. While the applicant acknowledges in their submitted appeal that this issue it is not a matter for the appeal process, they wish to advise the Board that following discussions with the Donegal County Council's Senior Road Engineer it was confirmed that the Roads Authority would allow cables in the road once the operator can furnish a Section 48 licence consent from the Commission of Regulation of Utilities (CRU). While I acknowledge this, it should be noted that any further consents that may have to be obtained are essentially a subsequent matter and are outside the scope of the planning appeal. The issue of licence consent will be evaluated under a separate legal code and thus need not concern the Board for the purposes of this appeal.

10.5.4. In addition to the concerns regarding the HV cable consent process, the observers to the appeal also claim that this would amount to project splitting, given that separate consent is required for an element of the project from the CRU. In the case of the current development the grid connection is regarded as an integral part of the overall wind farm project. The grid connection works have been assessed for environmental impacts both independently and cumulatively with other elements of the proposed project as part of the submitted EIAR and I am therefore satisfied that the appropriate examination of this element of the project has occurred and that no project splitting arises.

11.0 Recommendation

11.1. Having regard to the documentation on file, the observations and submissions received, the site inspection and the assessment above, I recommend that permission for the above-described development be refused, for the following reasons and considerations

12.0 Reasons and Considerations

In coming to this decision, the Board had regard to the following:

- (a) national policy with regard to the development of alternative and indigenous energy sources and the minimisation of emissions from greenhouse gases including the Climate Action Plan 2021,
- (b) the provisions of the Wind Energy Development Guidelines –Guidelines for Planning Authorities issued by the Department of the Environment, Heritage and Local Government in June, 2006 (and Draft Amendments, 2019),
- (c) the policies set out in the Regional Spatial and Economic Strategy for the Northern and Western Regional Assembly,
- (d) the policies of the planning authority as set out in the Donegal County Development Plan 2018 -2024 (as varied),
- (e) the character of the landscape in the area and landscape designations that apply,
- (f) the characteristics of the site and of the general vicinity,
- (g) the pattern of existing and permitted development and the distance to dwellings and other sensitive receptors from the proposed development,
- (h) the Environmental Impact Assessment Report submitted,
- (i) the Natura Impact Statement submitted and the likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites,
- (j) the appeal and supporting documents,

- (k) submissions and observations made in connection with the planning application and appeal, and
- (l) the report of the Inspector.

Appropriate Assessment: - Stage 1

The Board considered the Screening Report for Appropriate Assessment, the Natura Impact Statement and all the other relevant submissions and carried out both an appropriate assessment screening exercise and an appropriate assessment in relation to the potential effects of the proposed development on designated European Sites.

The Board agreed with the screening assessment and conclusion carried out in the Inspector's report that the West of Ardara/Maas Road SAC (000197); River Finn SAC (002301), Lough Nillan Bog SPA (004110), and Derryveagh and Glendowan Mountains SPA (004039) are European Sites which the proposed development has the potential to have a likely significant effect. The Board also agreed that the proposed development is not likely to have significant effects on the River Foyle and Tributaries SAC [UK0030320] in the absence of mitigation and therefore excluded this site from further consideration.

Appropriate Assessment: - Stage 2

The Board considered the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment of the implications of the proposed development for European Sites, namely West of Ardara/Maas Road SAC (000197); River Finn SAC (002301), Lough Nillan Bog SPA (004110), and Derryveagh and Glendowan Mountains SPA (004039), in view of the sites' conservation objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, the Board considered, in particular, the following:

- (a) the site-specific Conservation Objectives for these European Sites,
- (b) the current conservation status, threats and pressures of the qualifying interest features,

- (c) the likely direct and indirect impacts arising from the proposed development, both individually or in combination with other plans or projects,
- (d) the views contained in submissions received from the planning authority, prescribed bodies and other observers, and
- (e) the mitigation measures which are included as part of the current proposal.

In completing the appropriate assessment, the Board accepted and adopted the screening and the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the aforementioned European Sites, having regard to the sites' conservation objectives.

In overall conclusion, the Board is not satisfied on the basis of the information provided with the application and appeal that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the Lough Nillan Bog SPA (site code: 004110) in view of the site's conservation objectives in relation to the SCI Merlin.

Environmental Impact Assessment

The Board completed in compliance with s.172 of the Planning and Development Act 2000 an environmental impact assessment of the proposed development, taking into account:

- the nature, scale, location, and extent of the proposed development;
- the Environmental Impact Assessment Report and associated documentation submitted with the application;
- the submissions from the applicant, the planning authority, the observers and the prescribed bodies; and
- the Inspector's report;

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, provided information that is reasonable and sufficient to allow the Board to carry out an Environmental Impact Assessment and to reach a reasoned conclusion on the significant effects of the proposed development on the environment, taking into account current knowledge and methods of assessment. The Board was satisfied that the information and data

available was up to date at the time of taking the decision. The Board was satisfied the Inspector's report sets out how these various environmental issues were addressed in the examination and recommendation and are incorporated into the Board's decision.

Reasoned Conclusions

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

- Potential impacts arising on population and human health as a result of noise and shadow flicker to residential property in the vicinity, which would be encountered during the construction and operational phase and would be mitigated by the implementation of the measures set out in the EIAR and the CEMP which include specific provisions relating to the control of dust, noise and shadow flicker.
- 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 and obtrusive impact on visually and environmentally sensitive landscapes, and would impact on the amenity of the area and designated landscape. The incongruity with the natural landscape and adverse visual impact would not be mitigated by design, the separation from settlements or its setting on the downward side of the slope of Aghla Mountain or its partial setting of certain turbines within commercial forestry. In addition, it should be noted that the comparisons used as part of the LVIA between the proposed development and the previously permitted but now expired permission (ABP PL05B.237656) was not considered useful for the purposes of this assessment.
- Potential impacts arising on lands, soil and geology, as a result of the increased risk of peat instability and peat erosion during the construction and operational phases which would be mitigated by the implementation of measures set out in the EIAR, Peat Stability Plan and the CEMP which include specific provisions relating to peat and spoil management, including monitoring.

- Potential impacts on water quality, hydrology, hydrogeology and associated aquatic ecology, in particular FWPM and Atlantic salmon as well as other fish species and additionally on water dependant species such as otter arising from the potential indirect effects caused by increased run-off, such as soil erosion and sediment release into the receiving watercourses, which would be mitigated by project design features, including attenuation measures and management of any in-stream works, and the measures outlined in the CEMP, including Ecological Management Plan, HDD methodology, Watercourse Crossing Methodologies, Surface Water Quality Monitoring Plan and an outline Site Drainage Management Plan;
- Potential positive impacts on air and climate during the operational phase arising from the connection of renewable energy technology and transfer to the national grid, thereby facilitating a transition from fossil-fuel dependent energy sources to renewable sources;
- Potential negative impacts on the public road network due to the increase in vehicle movements and resulting traffic during the construction phase which would be mitigated by upgraded site access and the preparation of a Construction Traffic Management Plan.
- Development of wind turbines at the height, scale and siting proposed would likely pose a significant risk of collision for the Annex I bird species White-tailed Eagles and Golden Eagle, as well as loss of habitat and displacement for raptors prevalent at this location. Furthermore, the proposed development, would substantially erode the quality of the environment for these sensitive bird species, including the erosion of habitat, encroachment of foraging areas, and effect on roosting and breeding sites.
- Potential impacts during the construction phase for foraging/breeding Merlin and significant uncertainty in the information submitted to allow a determination that there would be a 'Low' magnitude of effect during construction on this species of 'Very High' Nature Conservation Importance. The proposal during construction, operational and decommissioning phases would reduce the attractiveness of the area for Merlin and in turn may cause displacement of species, substantially eroding the quality of the environment

for these sensitive bird species and affecting roosting and breeding sites. The proposed development would therefore fail to ensure the continued presence and reproduction of Merlin in their current area of distribution in this area of County Donegal.

- The impact on cultural heritage would be mitigated by archaeological monitoring with provision made for resolution of any archaeological features or deposits that may be identified.
- Positive environmental impacts would arise during the operational phase from the generation of renewable energy.

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

The Board concluded that the development would result in 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 and would have a dominant and obtrusive impact on visually and environmentally sensitive landscapes. The incongruity with the natural landscape and adverse visual impact would not be mitigated by design, the separation from settlements or its partial setting within commercial forestry.

The Board concluded that the appeal site and surrounding area is of importance to Merlin, a species included for protection in Annex I of the Birds Directive (2009/147/EEC) and a SCI of both the Lough Nillan Bog SPA (004110), and Derryveagh and Glendowan Mountains SPA (004039), and that notwithstanding the mitigation measures set out by the appellant to address the impacts of the development on Merlin, it is considered that the proposed development would have an adverse effect on the species in failing to ensure the continued presence and reproduction of Merlin in their current area of distribution in County Donegal.

The Board concluded that the appeal site and surrounding area is of importance to both Golden Eagle and White-tailed Eagle, species included for protection in Annex I

of the Birds Directive (2009/147/EEC), and that notwithstanding the mitigation measures set out by the appellant to address the impacts of the development on these species, it is considered that the proposed development would have a significant adverse effect failing to preserve and maintain sufficient diversity of area and habitat for both species and failing to ensure the continued presence and reproduction of these species in their current area of distribution in County Donegal.

I recommend that permission is refused in accordance with the following reasons, considerations:

Proper planning and sustainable development:

1. The proposed development is located on a site, which lies within an area designated for Especially High Scenic Amenity, as outlined under Policy NH-P-6 of the County Donegal Development Plan, 2018-2024 (as varied) *'it is a policy of the Council to protect areas identified as Especially High Scenic Amenity on Map 7.1.1: 'Scenic Amenity'. Within these areas, only developments assessed to be of strategic importance or developments that are provided for by policy elsewhere in this Plan shall be considered'*. Notwithstanding the potential contribution this proposed renewable energy project would have in meeting National renewable energy targets, it is considered that the proposal would result in a considerable and unacceptable adverse visual impact upon this upland environment designated as an Especially High Scenic Amenity area. It is considered that the proposed development sited at this location would constitute a highly obtrusive development that would detract from the existing natural character of the area, would undermine the setting of this unspoilt valley and would erode the landscape and visual quality of this rural area and compromise the scenic amenities of this visually sensitive and vulnerable area. The proposed wind turbines would, thereby, be excessively dominant features and a visually obtrusive form of development in this landscape, would materially conflict with policy NH-P-6 as set out in the Donegal County Development Plan 2018-2024 (as varied), 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.

2. The appeal site is located in a non-designated however regionally-important area for Merlin, the identified pair of Merlin confirmed to be breeding in the area are considered to be of national/international importance and the appeal site is identified as an important foraging habitat for Merlin, which is afforded protection under Annex I of the EU Birds Directive (2009/147/EEC). The Board is not satisfied, based on the details submitted with the application and appeal, notwithstanding the mitigation measures set out to address the impacts on Merlin, that the proposed development would not have a significant adverse impact on Merlin. It is considered that the proposed development would be contrary to objectives NH-O-1 and NH-O-10, as well as policy NH-P-5, of the Donegal County Development Plan 2018-2024 (as varied), and, therefore, would be contrary to the proper planning and sustainable development of the area. In addition, given the close proximity of the proposed development to the Lough Nillan Bog SPA (004110) the Board is not satisfied, on the basis of the information provided with the application, that the proposed development would not adversely affect the integrity of this European site in view of the site's Conservation Objectives in relation to Merlin. In such circumstances the Board is precluded from granting permission.
3. The site of the proposed development is located within an area of significant ornithological value, as evidenced by the applicant's bird surveys in support of the application. It is considered that the siting, height, scale and operation of the proposed turbines would result in a significant risk of collision for the Annex I bird species Golden Eagle and White-tailed Eagles, as well as loss of habitat and displacement for raptors prevalent at this location. On the basis of the information submitted in support of the application and specifically within the submitted Environmental Impact Assessment Report in respect of the Golden Eagle and the White Tailed Eagle, both of which are classed as 'high sensitivity to wind farm developments', it is considered that potential risks to the aforementioned Annex I species have not been adequately addressed in the form of scientific evidence and conclusions. The proposed development

would, thus, have significant adverse impacts on the ornithological importance of the area by way of disturbance and displacement of protected bird species and potential for bird strikes and would, therefore, be contrary to the proper planning and sustainable development of the area.

Máire Daly
Planning Inspector

28th July 2022