An Bord Pleanála

Inspector's Addendum Report

Development:	Wind farm of 61 no. turbines, 172MW output (revised from 112 no. turbines, 370MW output in the original proposal) at Oweninny, Bellacorick, Co. Mayo.

Application under Section 37E of Planning & Development Act 2000 (as amended)

Planning Authority:	Mayo County Council
Applicant:	Oweninny Power Limited
Type of Application:	Strategic Infrastructure Development
Dates of site inspection:	3rd March, 7th March,10th 11th March and 7th April 2014 and 17th February 2016.
Dates of Oral Hearing:	8th to 11th, 15th to 17th and 23rd April 2014
Inspector:	Dolores McCague

This report is an Addendum Report and should be read in conjunction with the previous Inspector's Report.

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Since Previous Report

I refer to the previous inspector's report dated the 14th November 2014 recommending that planning permission should be granted, subject to conditions, for the proposed development of 112 no. turbines (370MW output) at Oweninny, Bellacorick, Co. Mayo.

Arising from the High Court judgement in the case O'Grianna and Others vs An Bord Pleanála, the Board wrote to the applicants drawing their attention to the findings:

- The connection to the national grid forms an integral part of the overall development of which the construction of the turbines is the first part, and
- The cumulative effects of the construction of the turbines and the connection to the national grid must be assessed in order to comply with the Environmental Impact Assessment Directive.

The applicants were requested to submit a revised environmental impact statement to incorporate sufficient information to enable the Board to complete an EIA in relation to the overall proposal, including the grid connection for phase 3. Information to include:

- General corridor for proposed connection
- Nature of connection – overground and /or underground
- Pole/tower type and height(s) if overground
- The environmental impact statement should consider the cumulative effects of the proposed wind farm and proposed grid connection(s) based on the data submitted. In the event of alternative corridors being proposed in respect of any grid connection, details of each alternative route should be submitted, including an assessment of the cumulative effects of the proposed wind farm and each alternative connection corridor.

The applicant was also requested to submit a revised appropriate assessment screening report, and if necessary NIS, in respect of the overall proposal including the proposed grid connection(s) from phase 3.

1. Applicant's Response to Request for Significant Additional Information

A response to the Board's request for additional information was received on the 19th October 2015. The response states that permission is no longer being sought for the development of phase 3 as part of this application. As the Grid West project is still at an

early stage, a preferred substation location has not yet been identified, and it is not possible to provide the Board with sufficient information for it to assess to the required standard, the grid connection from phase 3, or even general corridors / alternative routes, at this time. The response was accompanied by a revised NIS, a supplemental EIS and a book of revised photomontages, for the reduced proposal: phase 1 and phase 2 only.

2. Notice of Significant Additional Information

Notices of receipt of significant additional information on the 17th November 2015, invited submissions to the Board no later than 16th December 2015. This period was extended at the request of observers to 13th January 2016, interested parties were informed by letter on the 15th December and notices were published on 21st/22nd December 2015.

3. Site Description

The site is identical to that in the original proposal: comprising some 5,000 hectares (50km^2) extending in an east west axis for approximately 11km and in a north south axis for some 7.4km. It comprises two distinct areas divided almost entirely by a narrow strip of private land holdings but is linked by an internal bridge over the Oweninny River. Phases 1 and 2 are located in the northern, middle and western parts of the overall site.

No structures will be located within the Oweninny site boundary which are hydraulically connected to the river systems in the north-eastern or south eastern parts of the site and there will be no drainage from any structure leading to the easterly flowing Owenmore or the Moy system. Phase 1 and 2 occupy approximately 116ha or 2.3% of the overall site and, excluding the borrow pit, gravel storage area and peat repository, the development occupies 1.2% of the site (per supplemental EIS Appendix 1, chapter 2. Per NIS, the wind farm components occupies 2.2 % of the site - 111ha).

4. Project Description

The original project was described in section 3 of the previous inspector's report. The main changes in the proposed revised project are that Phases 1 and 2 as previously proposed now comprise the entire project and phase 3 has been removed. This results in a reduction in most elements of the project:

Previous	Current
370 mega Watt (MW) wind farm	172 Mega Watts (MW) wind farm
112 (2.5–3.5 MW) wind turbine generators	61 (2.5–3.5 MW) wind turbine generators
Crane stands and Blade laydown areas at each turbine location (112)	Crane stands and Blade laydown areas at each turbine location (61)
4 no. electrical substations	2 no. electrical substations
Underground cables from the wind turbines to the substations	Underground cables from the wind turbines to the substations
2 no. 110 kV overhead lines comprising angle masts and twin wooden pole sets connecting proposed substations 1 & 2 to the existing Bellacorick substation (1.7 km from Electrical Substation 1 and 2.5 km from Electrical Substation 2) with undergrounding of electricity cables for a distance of up to 2km on the approach to Bellacorick substation.	2 no 110kV overhead lines comprising angle masts and twin wooden pole sets connecting proposed substations to the existing Bellacorick substation (1.7 km from Electrical Substation 1 and 2.5 km from Electrical Substation 2) with undergrounding of electricity cables for a distance of up to 2km on the approach to Bellacorick substation.
8 permanent wind measurement anemometer stations	6 permanent wind measurement anemometer stations
Operation and maintenance building	Operation and maintenance building
85 kilometres of access tracks including c.6km of upgraded existing track	49 kilometres of access tracks, including c 6km of upgraded existing track
3 site entrances for construction traffic	2 site entrances for construction traffic
Visitors centre	Visitors centre
Grid connection for phases 1 & 2 to the existing Bellacorrick 110 kV substation, and upgraded existing transmission network, including Bellacorick to Castlebar 110kV and Bellacorick to Moy 110kV overhead line; and for phase 3 to Grid West.	Grid connection to the existing Bellacorrick 110 kV substation, and upgraded existing transmission network, including Bellacorick to Castlebar 110kV and Bellacorick to Moy 110kV overhead line.

Material quantities			Material quantities		
Project phase	Material	Quantity	Project phase	Material	Quantity
Phase 1	Fill (m^3)	196,153	Phase 1	Fill (m^3)	196,153
	Concrete (m^3)	33,222		Concrete (m^3)	33,222
	Rebar (t)	3,013		Rebar (t)	3,013
Phase 2	Fill (m^3)	206,175	Phase 2	Fill (m^3)	206,175
	Concrete (m^3)	30,180		Concrete (m^3)	30,180
	Rebar (t)	2,695		Rebar (t)	2,695
Phase 3	Fill (m^3)	334,542			
	Concrete (m^3)	56,430			
	Rebar (t)	5,103			
Temporary Works					
1 no. borrow pit to provide material for access track construction (NE corner, adjacent T37)			1 no. borrow pit to provide material for access track construction (NE corner, adjacent T37)		
Concrete batching plant (centre of site, adjacent T68)			Concrete batching plant (centre of site, adjacent T68)		
Temporary Site Compounds - contractor(s) construction lay down areas and materials storage areas			Temporary Site Compounds- contractor(s) construction lay down areas and materials storage areas (unspecified number but fewer than with phase 3)		

5. Planning History - Updates

Update to the planning history:

PA0031 Application by Coillte for Wind Farm Development at Cluddaun, refused planning permission.

02/1278 EirGrid - proposed modification of the existing Bellacorick substation, planning permission granted (October 2002).

15/456 EirGrid - extension and upgrade of the existing Bellacorick substation, planning permission granted (October 2015). The NIS notes that as part of standard best

practice, fuel/oil interceptors or sediment traps will be utilised during construction, so that impacts on water quality do not occur downstream, and a CEMP will be developed and implemented.

Pl16.244534 Planning Authority Reg Ref 14/410 - EirGrid - uprating of 19.5km section of the existing Bellacorick to Castlebar 110kV overhead line, planning permission granted.

PL16.245415 (appeal against Development Contribution) Planning Authority Reg Ref 15/45 EirGrid -uprate of the existing Bellacorick to Moy 110kV overhead line, planning permission granted.

15/611 (undecided) ESB Networks Refurbishment / Uprate of the Bellacorick to Bangor Erris 38kV overhead line; application lodged with Mayo County Council.

PL16.245355 Planning Authority Reg Ref 14/666 - Proposed Wind Farm at Tawnanasool – planning permission refused. (This decision was made since the significant further information was submitted).*

15/460 Proposed Meteorological Mast at Sheskin for ABO Wind Ireland Limited, temporary permission for three years granted, (October 2015).

15/825 (undecided) ABO Wind Ireland Ltd 8 wind turbines at Sheskin, Bellacorick, application lodged with Mayo County Council, further infiroamtion sought.

No planning application (as of date of this report) - Grid West Project – EirGrid - Stage 1 report published, Stage 2 brochure published, Government–appointed, Independent Expert Panel, report (and accompanying appendices) published (July 2015). The Grid West options assessed in the report include:

- A 400kV overhead line with 400kV substations
- A 220kV overhead line with 200kV substations
- A HVDC underground cable with Inverter Stations.

6. Significant Additional Information Received

The significant additional information includes a revised NIS and revised EIS.

Intormation referred to hereunder is mainly additional to that previously submitted.

6.1. Revised NIS

The contents of the NIS has been expanded substantially, from the previous NIS. The NIS has been prepared by Dr Brian Madden of BioSphere Environmental Services, in association with ESB International. It is based on desk reviews and extensive site surveys carried out between 2010 and 2013, and includes:

The NIS is 98 pages long and includes sections on Screening for Appropriate Assessment and Appropriate Assessment (i.e. stage 2).

There is specific reference to the haul route (from Killybegs) in the revised NIS. Designated sites crossed by the proposed haul route are:

- Lough Eske and Ardnamona Wood SAC (site code 0163): the river Eske is crossed by the N56 while the Drummenny River is crossed by the N15.
- Lough Melvin SAC (site code 0428): the Drowes River is crossed by the N15.
- Cummeen Strand / Drumcliff Bay SAC (site code 0627): the extreme eastern inlet of the estuary is crossed by the N15.
- Unshin River SAC (site code 01898): the Ballysadare and the Owenmore rivers are crossed by the N4.
- River Moy SAC (site code 02298): the River Moy and its tributaries is crossed at seven locations by the N17, N5, N26 and the N59.
- Bellacorick Bog Complex SAC (site code 01922): the N59 passes through the SAC at two locations at Dooleeg.

Apart from the crossing over the main channel of the Moy at Cloongullaun Bridge to the northwest of Swinford, the existing roads and bridges will be adequate to accommodate the oversized loads (i.e. widening or structural works are not required) and are not considered further. At Cloongullaun Bridge, some works will be required and possible impacts on the qualifying interests of the River Moy SAC are considered.

6.1.1. European site identification

In accordance with European Commission Methodological Guidance (EC2001), a list of European sites that can be potentially affected by the project has been compiled. Adopting the precautionary principle in identifying these sites, it was decided to include all Natural 2000 sites within 15km radius of the development site; it would seem improbable that the project could have impacts on European sites that are more than

15km from Oweninny, as there are no such sites with any linkages to the Oweninny area. The sites considered are:

SAC's:

Bellacorick Iron Flush SAC (site code 0466)
Lough Dahybaun SAC (site code 02177)
Bellacorick Bog Complex SAC (site code 0922)
Owenduff/Nephin Complex SAC (site code 0534)
River Moy SAC (site code 02298)
Carrowmore Lake SAC (site code 0476)
Broadhaven Bay SAC (site code 0472)
Slieve Fyagh Bog SAC (site code 0542)
Glenamoy Bog Complex SAC (site code 0500)

SPA's:

Owenduff/Nephin Complex SPA (site code 004098)
Lough Conn & Lough Cullin SPA (site code 004228)
Carrowmore Lake SPA (site code 004052)
Blacksod Bay / Broadhaven Bay SPA (site code 004037).

A short description of each site is given in the NIS.

6.1.2. Potential Impacts

Potential Impacts are identified as:

Loss of, or physical disturbance to, habitats
Potential effects on peat stability
Potential impairment of water quality due to construction works
Potential impairment of water quality during operation phase
Potential impacts on hydrological functioning of flush habitats
Potential impacts on bird species

A short description of each potential impact is given.

6.1.3. Loss of, or physical disturbance to, habitats.

Impacts considered include Cloongullaun Bridge where works are required to the haul route. The scale and nature of the works would not affect any of the qualifying Annex I habitats for which the site is selected: the areas within the site, which adjoin the bridge, are developed areas.

6.1.4. Potential effects on peat stability includes.

Reference is made to the Scottish Executive guidelines, the conservative categorisation of the site, and the Peat Stability Risk Assessment (PSRA). An assessment of the potential for peat instability was undertaken at each turbine/hardstand, substation, section of road and building to determine a risk rating for the construction works in the area. This shows areas of substantial risk. Significant or substantial risks are largely driven by two factors: the distance from the nearest defined watercourse, which in turn affects the quantity of material that could arise in a displacement, and the depth of peat at the location. Some locations are shifted into the substantial category of risk because of their distance from the nearest watercourse even though other important factors such as ground slope would be considered relatively favourable.

A computer generated analysis of the peat stability at the site has been carried out. This involves modelling the site, assuming a translational slip failure. Very low undrained shear strength was assumed: 2.5kPa, and a surcharge of 10kPa. Although crude and conservative, it has been adopted as a useful tool. The PRSA suggests that except for areas to the north and south of the Muing River and to the east of Fornought Hill the risk of peat instability across the majority of the remainder of the site is low.

Without mitigation there is some risk to the conservation objectives of:

- Bellacorick Bog Complex SAC from peat slippage associated with various construction sites in the vicinity of the northernmost sector of Phase 1, which adjoin the SAC; and
- Carrowmore Lake SAC where there is substantial risk along the roads leading to T33, T34 and T39 and a significant risk at the location of the three turbines.

6.1.5. Potential impairment of water quality due to construction works

There is a potential risk to Bellacorick Bog Complex SAC, and River Moy SAC (haul road), from sediment loss and other substances such as lubricants, waste concrete etc.

6.1.6. Potential impairment of water quality during operation phase

There is a potential risk to Bellacorick Bog Complex SAC from sediment loss which would diminish over time as re-vegetation takes place.

6.1.7. Potential impacts on hydrological functioning of flush habitats

The Oweninny Bellacorick area is characterised by the presence of flush systems notably the Bellacorick Iron Flush and Formoyle flushes. The evidence given at the oral hearing, regarding the Bellacorick Iron Flush, is referred to and restated: the proposed development areas are significantly outside the delineated groundwater and surface water catchment of the flush; turbine foundations in the vicinity of the iron flush will be shallow excavated and piled and there will be no dewatering of the foundation. The regional groundwater flow below the borrow pit area is occurring independently of the flow regimes supporting the iron flush, and it can be concluded that the construction of the borrow pit could not affect the hydrology of the iron flush.

The Formoyle series of flushes occur on the blanket bog to the east of the site. Phase 1 and 2 of the project would not have any potential to impact on these flushes.

6.1.8. Potential impacts on bird species

Owenduff/Nephin Complex SPA, located adjacent to the south-west is specifically selected for Greenland white-fronted geese, Merlin, Peregrine and Golden Plover.

Lough Conn & Lough Cullin SPA, to the south east of Crossmolina, approx. 10 km from the site, is of particular ornithological importance for wintering Greenland white-fronted geese and Tufted duck and for nesting Common Scoter and Common Gull.

Carrowmore Lake SPA, approx. 9km to the west-northwest, supports an important breeding colony of Common Gulls and in the past Sandwich Terns. During winter, the lake is used by Greenland white-fronted geese and various wildfowl species.

Blacksod Bay / Broadhaven Bay SPA, approx. 13km to the northwest, is a large coastal SPA of high ornithological importance for its excellent diversity of wintering waterfowl which includes nationally important populations of five species.

There would be no disturbance of any bird species associated with these sites during the construction and or operational phases of the proposed wind farm.

There are no regular flightlines over the site by any target species, especially wintering waterfowl and breeding birds of prey (merlin, peregrine etc). There are no regular flightlines between feeding and roost areas over the site by Greenland white-fronted geese.

While there are four SPAs within a 15km radius of the site, it can be concluded with a high degree of certainty that activities associated with the proposed project, either during the construction and/or operation phases, could not have any impacts, direct or indirect, on the conservation objectives of the SPAs.

6.1.9. Assessment of significance

6.1.10. Bellacorick Bog Complex SAC

The site adjoins Bellacorick Bog Complex SAC along the northern, eastern and southern boundaries. There is a small portion of overlap between the sites in the eastern part of O'Boyle's Bog. This area will not be developed.

Much of the drainage in the eastern part of the site is to watercourses which flow through the SAC.

Phase 1 adjoins the SAC along part of the northern boundary, but is separated from the SAC by the Oweninny river and its tributary the Fiddaunmuingeera river. There would be no direct impact on the SAC, but there is the possibility that the SAC could be affected indirectly by peat slippage due to construction works.

In the absence of mitigation some of the qualifying interests could be affected by peat slippage.

A substantial slippage could flow along the local watercourses and spill out over habitats for which the site is selected.

6.1.11. River Moy SAC

There is no hydraulic connectivity between phase 1 and phase 2 development areas and the Deel River tributaries which drain the south-east sector of the overall site. Phase 1 and phase 2 do not have the potential to impact on the SAC.

6.1.12. Bellacorick Iron Flush SAC

There is no real potential to impact on groundwater flows or surface water flows to the flush area as all the proposed development areas in the vicinity are significantly outside the delineated groundwater and surface water catchment of the flush. Because of the high conservation importance of this sensitive site, monitoring will also be required in the pre-construction, construction and post-construction periods.

6.1.13. Lough Dahybaun SAC

Phases 1 and 2 are outside the catchment and there is no potential to impact on the SAC.

6.1.14. Carrowmore Lake SAC

This SAC extends from Carrowmore Lake eastwards to the road to Sheskin Lodge on the western boundary of the site (where Largan More Bog is located). T33 is located 216m from the western site boundary. T39 is located 205m from the western site boundary. A minor road separates the site from the Largan More Bog area. At these turbines, which are downslope of Largan More Bog, peat is just over 1m in depth. While there is an assessed substantial risk of peat slippage associated with the roads leading to these two turbines, the likelihood of a slippage occurring, in the absence of further mitigation is low, as historically peat slides caused by construction activities tend to start at the point of construction and flow downhill, and generally are due to loading of the surrounding peat from sidecasting on the downslope site. In this area the peat is relatively shallow and the peat will be excavated and will not be sidecast.

In the absence of appropriate mitigation at construction stage some of the conservation objectives of the SAC could be affected by peat slippage.

6.1.15. Owenduff/Nephin Complex SAC

This SAC is in close proximity to the south-western boundary of the wind farm site, at a distance of approx. 100m. At this location the SAC is wholly located on the opposite side of the Owenmore River. The nearest part of the construction works is 750m from the SAC. It is concluded with certainty that the project could have no impact on the SAC.

6.1.16. Broadhaven Bay SAC

This SAC is located to the northwest, separated from the site by a distance of 13km, with substantial areas of forestry between the two. It can be concluded with a high

degree of certainty that the proposed project will not have any impacts, on the conservation objectives of the SAC.

6.1.17. Slieve Fyagh Bog SAC

This site is approx. 2.5km from the north-western boundary of the site, separated from the site by distance with substantial areas of forestry between the two. It can be concluded with a high degree of certainty that the proposed project will not have any impacts, on the conservation objectives of the SAC.

6.1.18. Glenamoy Bog Complex SAC

This site is approx. 3km from the north-western boundary of the site, separated from the site by distance with substantial areas of forestry between the two. It can be concluded with certainty that the proposed project will not have any impacts, on the conservation objectives of the SAC.

6.1.19. Owenduff/Nephin Complex SPA

This SAC is in close proximity to the south-western boundary of the wind farm site, approx. 100m away. At this location the SAC is wholly located on the opposite side of the Owenmore River. The nearest part of the construction works is 750m from the SPA. None of the selected bird species have regular flight paths over the site. It can be concluded with a high degree of certainty that the proposed project will not have any impacts, on the conservation objectives of the SPA.

6.1.20. Lough Conn & Lough Cullin SPA,

This site is approx. 10km to the southeast. It is separated from the site by distance. None of the selected bird species have regular flight paths over the site. It can be concluded with a high degree of certainty that the proposed project will not have any impacts, on the conservation objectives of the SPA.

6.1.21. Carrowmore Lake SPA

This site is approx. 9km to the west-northwest. It is separated from the site by distance. None of the selected bird species have regular flight paths over the site. It can be concluded with certainty that the proposed project will not have any impacts, on the conservation objectives of the SPA.

6.1.22. Blacksod Bay / Broadhaven Bay SPA

This site is approx. 13km to the northwest. It is separated from the site by distance and none of the selected bird species have regular flight paths over the site. It can be concluded with certainty that the proposed project will not have any impacts, on the conservation objectives of the SPA.

6.1.23. Conclusion of Screening

Screening has determined that Lough Dahybaun SAC, Owenduff/Nephin Complex SAC, Broadhaven Bay SAC, Slieve Fyagh Bog SAC, Glenamoy Bog Complex SAC, Owenduff/Nephin Complex SPA, Lough Conn & Lough Cullin SPA, Carrowmore Lake SPA and Blacksod Bay / Broadhaven Bay SPA, will not be impacted by phases 1 and 2 of the project alone or in combination with other projects.

Bellacorick Bog Complex SAC, Bellacorick Iron Flush SAC, Carrowmore Lake SAC and River Moy SAC have potential to be impacted and require stage 2 assessment.

6.1.24. Appropriate Assessment

6.1.25. Bellacorick Bog Complex SAC

Bellacorick Bog Complex SAC is a large peatland site situated on a low-lying undulating plain consisting of two large areas separated by an area of forestry.

The larger of the two areas extends from south of Bellacorick eastwards, south-eastwards and then north to Doobehy. The smaller area is situated 6km south-east of Glenamoy and extends south to 3km north of Bellacorick and east towards Doobehy.

The bog is predominantly lowland blanket bog which grades into intermediate bog with characteristics of both blanket bog and raised bog at Doobehy/Srahmeen and Owenboy. The bog contains a variety of well-developed pool systems with raised and blanket bog pool types. It also includes some excellent examples of dystrophic lakes. The areas of blanket bog vary in the quality of their habitats. Many of the bogland areas are traversed by river and stream channels with diverse associated vegetation. Spring fed species rich flushes are a significant feature of the SAC and occur throughout the bog complex. The flushes are notable for the presence of several boreal relict mosses and liverworts. A rare vascular plant species, Marsh Saxifrage (Saxifraga hirculus), occurs here, at one of only very few known locations in Ireland. The species is listed in Annex II of the EU Habitats Directive.

The site supports a population of the rare snail, Vertigo geyeri, a species listed in Annex II of the EU Habitats Directive.

The site supports several well-documented sites of considerable conservation significance e.g. Formoyle, Brackloon and Cloonoragh flushes and the Owenboy and Knockmoyle-Sheskin Nature Reserves. These areas are still intact and remain of unique scientific and conservation interest.

The site is selected for the following Annex I habitats and Annex II species:

- Vertigo geyeri
- Marsh saxifrage
- Natural dystrophic lakes and ponds
- Northern Atlantic wet heaths with Erica tetralix
- Blanket bog (*active only)
- Depressions on peat substrates of the Rhynchosporion, and
  Alkaline fens.

The generic conservation objective is: to maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

6.1.26. Bellacorick Iron Flush SAC,

Bellacorick Iron Flush (code 0466) is entirely surrounded by the subject site. It is one of only eight recorded stations for the very rare species, Marsh saxifrage, in Ireland. All these locations are within 10km of the Iron Flush. The habitat in which it is found is typical of the species, though the ground is drier than on other locations. The fen is surrounded by extensive areas of commercially cut peat and drains, that have caused a lowering of the water table, resulting in the loss of vegetation associated with wetter areas. Some of the typical fen species that (formerly) were present are now absent or scarce (rare mosses homalothecium nitens and meesia triquetra) and the vegetation shows trends towards drier, more acidic species. Without further studies, it is unknown if the drying out of the flush and the lack of grazing will affect the survival of the species.

The site is selected for the following (Annex I habitats and Annex II) species:

- Marsh saxifrage.

The conservation objectives can be summarised as:

To maintain or restore the favourable conservation of habitats Annex I and species Annex II for which the SAC has been selected: Marsh saxifrage.

The NPWS Conservation Statement (2009) gives conservation objectives:

To maintain the Annex II species for which the SAC has been selected at favourable conservation status: Marsh Saxifrage,

To maintain the extent, species richness and biodiversity of the entire site, and

To establish effective liaison and co-operation with landowners, legal users and relevant authorities.

6.1.27. Carrowmore Lake SAC

There are two main parts to the site:

Carrowmore Lake, a large, shallow oligotrophic/mesotrophic lake, and

Largan More Bog, an area of blanket bog. From an altitude of 6 m at the lake, the site grades upwards in a general south-easterly direction, reaching 199 m on Largan More Bog.

The site is selected for the following Annex I habitats and Annex II species:

- Shining sickle moss
- Marsh saxifrage
- Blanket bogs (* if active only), and
- Depressions on peat substrates of the Rhynchosporion.

The conservation objective is:

To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected.

6.1.28. River Moy SAC

The system drains a catchment area of 805 km^2. The Moy system is one of Ireland's most important salmon waters and it also encompasses two of Ireland's best lake trout fisheries in Loughs Conn and Cullin. Although the Atlantic Salmon (*Salmo salar*) is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is an Annex II species. The Moy is a most productive catchment in salmon terms and this can be attributed to its being a fingered system with a multiplicity of 1^{st} to 5^{th} order tributaries which are large enough to support salmonids <

2 years of age, while at the same time being too small to support significant adult trout numbers, and are therefore highly productive in salmonid nursery terms.

The site is selected for the following Annex I habitats and Annex II species:

- White-clawed crayfish
- Sea lamprey
- Brook lamprey
- Salmon (only in fresh water)
- Otter
- Alkaline fens
- Active raised bogs
- Degraded raised bogs still capable of natural regeneration
- Depressions on peat substrates of the Rhynchosporion
- Old sessile oak woods with Ilex and Blechnum in the British Isles, and
- Alluvial forests with Alnus glutinosa and Fraxinus excelsior.

The conservation objective is:

To maintain or restore the favourable conservation condition of the Annex I habitat(s) and/or the Annex II species for which the SAC has been selected:

6.1.29. Potential Impacts:

6.1.30. Bellacorick Bog Complex SAC

Indirect affects arising from peat slippage due to construction works in the northern part of Phase 1. The turbines closest are T10, T2, T4, T1, T3, T7, T12, T23, T41 and T45. The Peat Stability Risk Assessment has categorised these turbines and associated roads as having a risk rating of insignificant to significant. The risk of peat instability is negligible in a standard construction environment. A substantial slip could flow along the watercourses and spill out over the various bog habitats for which the site is selected.

6.1.31. Bellacorick Iron Flush SAC

A focused hydrogeological assessment showed that there is no real potential to impact on groundwater flows or surface water to the flush as the proposed development is significantly outside the delineated groundwater and surface water catchment. Nevertheless, because of the sensitivity and small size of the flush site and because it is

surrounded by the subject site, it is considered that monitoring will be required in the pre-construction, construction and post-construction periods to demonstrate that there have been no impacts on the conservation objectives. Focused mitigation is required to provide certainty that there will be no physical impacts during construction.

6.1.32. Carrowmore Lake SAC

In the absence of appropriate mitigation the conservation objectives could be affected by peat slippage at construction stage, potentially affecting: Blanket bogs (* active only), and Depressions on peat substrates of the Rhynchosporion.

6.1.33. River Moy SAC

In the absence of appropriate mitigation at Cloongullaun Bridge along the proposed haul route, conservation objectives could be affected by impairment of water quality namely: White-clawed crayfish, Sea lamprey, Brook lamprey, Salmon and Otter.

6.1.34. Mitigation Measures

6.1.35. Peat Stability

The design has minimised risk of peat instability.

Preliminary site investigation and peat stability risk assessment are set out. During the detailed design Zonal Peat Stability Risk Assessments (ZPSA) will be required for areas of substantial risk and in specific areas of significant risk.

Information presented at the oral hearing, provided by Dr Paul Jennings, is summarised, including:

- peat depth across 70% of the site is less than 1.5m;
- slopes are predominantly less than 3^0 and in many cases less than 2^0;
- peat stability risk assessment is divided into 4 risk levels and for each risk level a set of specific mitigation measures is provided, with mitigation becoming more onerous and stringent with increase in risk level;
- a geotechnical risk register has been produced, identifying more detailed risks and associated mitigation measures;
- the 20% shown in the substantial risk category is not a true reflection of the peat stability at the site. Detailed design using translational slide analysis, using site

investigation peat strength data for turbine areas within substantial risk category, shows that the global factor of safety ranges from 1.97 to greater than 10. The accepted minimum global factor of safety is 1.3 or greater. Actual peat strength values would be notably lower risk.

- notwithstanding the results of the detailed analysis, PRSA methodology will be applied.

Mitigation is addressed under the headings: insignificant risk mitigation measures; significant risk mitigation measures; and substantial risk mitigation measures. In relation to the latter, design mitigation measures are referred to:

A detailed site investigation will be undertaken prior to site works commencing. The site layout will be optimised following detailed site investigation to avoid or minimise risk. A geotechnical risk register will be developed for the site inclusive of a Zonal Peat Stability Risk Assessment for each turbine/hardstand, length of access track and other infrastructure which has been identified as having substantial risk, (i.e. a more focused assessment of peat stability carried out following the detailed site investigation). The input of geotechnical, hydrology and other experts is recommended.

A method statement will be developed including the construction mitigation measures. All roads in areas of substantial risk will be solid, unless approved by the geotechnical engineer. The quantity of excavated material will be accurately calculated and a detailed materials management plan written following detailed design. Consideration will be given to the quality of the mineral soils to be excavated as part of the work. Peat in these areas should be removed to areas of insignificant risk and stored upslope of a suitably designed retention structure, such as a solid road or embankment, to a maximum height of 1m unless otherwise approved by the Site Geotechnical Supervisor. Consideration will be given to sequencing the works. Peat excavations are not to be left unsupported for extended periods and will be backfilled with compacted material in a sequenced manner. Construction control measures and quality assurance / documentation are listed under construction mitigation measures.

It is concluded that the measures which are proposed to mitigate for peat slippage will ensure that there is no significant risk from peat stability to the conservation objectives of the two identified European sites.

6.1.36. Measures to maintain water quality

A Drainage and Sediment Control Plan has been prepared and will be implemented. A Construction and Environmental Management Plan will be prepared and items to be

included are listed. Risks of significant amounts of potential pollutants from construction activities reaching local watercourses are considered minimal.

6.1.37. Measures specific for Bellacorick Iron Flush SAC.

Hydrological and vegetation monitoring is recommended due to the sensitivity of the site. Measures are required to ensure that there is no access to the site by construction staff for the duration of the project.

The issue of potential impact from concrete dust arose at the oral hearing. The EIS does acknowledge that with respect to dust emissions, these can arise from materials delivery and fugitive emissions from silos, conveyor belt system and batching plant operation. The most effective means of reducing dust emissions at batching plants is to hard surface roadways and other areas where there is a regular movement of vehicles. The batching plant area will consist of a concrete apron which will be cleaned on a regular basis. Suppression of dust emissions from unsealed yards and roadways will be achieved by hard coring the stockpile areas and access tracks, and regular light watering when required. Dust emissions due to vehicles will be minimised by provision of a hard surfaced access road within the batching plant site to the batching plant area. Wheelwash facilities will be provided at the main site exits.

The batching plant will be operated in accordance with best practice including regular sweeping to prevent dust build-up.

Section 3.3.3 of the EIS details measures to ensure minimisation of dust emissions.

The batching plant will be operated to the highest standards and will include automatic control systems to ensure that no system failures occur during cement loading from cement tankers to the cement silos. Such control systems typically comprise interlocked systems linking pressure drop or particle emission from the bag filters or other containment areas to the control system, with instantaneous shut down of the cement filling process in the event of a pressure drop or dust detection. These control systems typically respond in milliseconds. An estimate of the impact of a cement dust release from the batching plant on the Bellacorick Iron Flush was provided at the oral hearing. The lowest rates of application, of cement/lime dust deposition, observed in a published review[1] of effects on sensitive plant species, were 0.6 and 0.5g/m^2/day. Estimated dust deposition from a one second release of cement dust from the batching plant on the Bellacorick Iron Flush is 0.014g/m^2; i.e. over 40 times lower than the value cited as the lowest which can cause impact on sensitive species in the Iron Flush.

[1] Farner A. M. The Effects of Dust on Vegetation A Review, Environmental Pollution, 79 (1993) 63-75

No significant impact on the vegetation of the iron flush will occur.

In the vicinity of the flush, foundations will be piled to avoid deep excavations and the need for dewatering.

The Department's request that T13, T14, T24, T29 and T30 be removed or relocated was addressed at the oral hearing. T13, T24 and T29 are significantly down gradient of the flush and separated from the flush by the Sruffaunnamuingabatia stream, a significant hydrological boundary. T14 and T30 are not up-gradient or down-gradient of the flush or its recharge and cannot alter groundwater flows or levels within the iron flush area.

6.1.38. Formoyle Flush

The Department requested evidence that this flush would not be impacted and that the extent of the flush be mapped. Site investigations were carried out. It has been demonstrated that there are no risks or pathways by which Formoyle flush can be impacted; due to physical and hydrological separation.

6.1.39. Borrow Pit

The Department raised concerns re. impact on Bellacorrick Iron Flush. Evidence at the oral hearing clarified that:

- while part of the borrow pit is higher than the flush emergences, there is no groundwater flow pathway or potential gradient from the borrow put towards the flush, and there is no potential for groundwater flow from the area of the proposed borrow pit towards the groundwater recharge area of the flush or the flush itself;
- the area directly between the borrow pit and flush has been assessed and the lenses of sands and gravels which occur at the borrow pit do not extend towards the flush. There is no potential permeable groundwater flow pathway, that will facilitate the local movement of groundwater, in directions significantly different to the regional direction. There is no evidence to suggest there is any impediment to flow towards the Sruffaunnamuingabatia stream, as there is a continuous bed of permeable sand and gravel recorded between the borrow pit and the stream; and
- elevated ground to the east of the flush is a source of shallow groundwater recharge to the flush. This recharge area is not hydrogeologically connected to the borrow pit area.

Access to the flush will not be permitted.

Monitoring of groundwater levels should be undertaken prior to, during and for a period after the operation of the borrow pit.

The project will fund a vegetation monitoring programme for the life time of the project, including both the flush and the adjoining blanket bog.

6.1.40. Operation phase mitigation

Runoff will continue to be directed to the drainage system comprising settlement ponds and overland flow. As bare surfaces stabilise and become re-vegetated potential impact from runoff will lessen. The project includes post-construction rehabilitation. A post-construction assessment by Bord na Móna ecologists/external ecologists will be carried out with the objective of drawing up a programme of rehabilitation works, for completion by contractors on site.

6.1.41. Residual impacts following mitigation

There are no significant residual impacts affecting the conservation objectives of Bellacorick Bog Complex SAC, Bellacorick Iron Flush SAC, Carrowmore Lake SAC and River Moy SAC.

6.1.1. In-combination effects:

Projects or land uses which are considered in this context are:

- Potential future development of Oweninny phase 3
- Other wind farms
- Meterological masts
- Power lines
- Substation project
- Power plants
- Renewable energy strategy
- Grid 25/Grid west
- Oweninny Cutaway Bog Rehabilitation Porgramme
- Forestry
- Peat Harvesting
- Agriculture

6.1.2. Potential future development of Oweninny phase 3

All three phases formed the basis for assessment of the original wind farm application, accompanied by a NIS.

L Dahybaun SAC – works associated with one turbine. In the absence of mitigation there could be impacts from peat slippage and the input of pollutants on the Annex II species, slender naiad.

Bellacorick Bog Complex SAC – phase 3 adjoins Bellacorick Bog Complex SAC along much of its external boundary and the drainage in phase 3 is predominantly to watercourses which flow through the SAC site. In the absence of mitigation, some of the qualifying interests could be affected by peat slippage to watercourses and habitats: Natural dystrophic lakes and ponds, Northern Atlantic wet heaths with Erica tetralix, Blanket bog (*active only), Depressions on peat substrates of the Rhynchosporion, and Alkaline fens. The presence of a well developed flush habitat at Formoyle, which provides habitat for the rare plant Marsh saxifrage, is highlighted.

River Moy SAC - phase 3 is upstream of the Deel River which is within the River Moy SAC. In the absence of mitigation some of the qualifying interests could be affected by peat slippage, in parts of the south-western sector; and water pollution due to construction works and due to runoff of suspended solids, in the south-western sector; with potential to impact the species for which the site is selected - White-clawed crayfish, Sea lamprey, Brook lamprey, Salmon and Otter; and also an important population of freshwater pearl mussel supported by the Deel River.

The phase 3 component would require connection to the national grid. When a point of connection is confirmed, it will be possible for phase 3 to be fully assessed, in accordance with the EIA Directive.

The NIS for all three phases concluded that the project would not have significant effects on the conservation objectives of any European site. It can be concluded that phase 1 and 2, in combination with phase 3, would not have significant effects on the conservation objectives of any Natura 2000 site.

6.1.3. Other Wind Farms

The other wind forms considered are:

Corvoderry – located within the Oweninny site.

Dooleeg – one 2MW wind turbine (previous permission for 2 x 1MW turbines).

Bellacorick Wind Farm – 21 turbine wind farm operational since 1992. This will be decommissioned and new turbines forming part of the final phase will be installed near where existing turbines are located.

Oweninny Wind Farm 180 turbines granted in 2003. This will not be built if the present project is permitted.

Tawnanasool Wind Farm – 8 turbines at appeal.

Corvoderry Windfarm- the NIS identified potential for adverse impacts on L Dahybaun SAC. This project (phase 1 and 2) are outside the hydrological catchment and there is no potential to contribute to impacts which may arise during the construction phase of the Corvoderry project.

Corvoderry NIS did not identify risks, such as from forest clearing, to any Natura site.

Dooleeg – the location of the site is a few hundred metres from the Oweniinny site. The planning application concluded that the project would have no adverse impacts on any designated site.

Tawnanasool - Stage 2 Appropriate Assessment was carried out by the proposer for 6 Natura sites, due to potential for negative impact on waterways downstream. The appropriate assessment carried out by Mayo County Council concluded that the proposed development on its own or in combination with other plans and projects, would not adversely affect the integrity of a European site.

Cumulative effect of wind farms on birds:

The present assessment concludes that Phase 1 and 2 would not have any adverse impacts on bird species associated with the various SPAs and SACs in the vicinity of the site. Corvoderry wind farm screening concluded that there are no likely potential impacts resulting from the proposal on Owenduff/Nephin Complex SPA or on bird species associated with any SAC. The Dooleeg assessment concluded that the project would not have any adverse impacts on bird species. Tawnanasool appropriate assessment carried out by Mayo County Council concluded that the proposed development on its own or in combination with other plans and projects would not adversely affect the integrity of a European site. It can be concluded that Oweninny Phase 1 and 2 would not add to any cumulative impact by wind farm projects on birds.

6.1.4. Meteorological Mast

A proposed Meteorological Mast at Sheskin for ABO Wind Ireland Limited was screened for AA concluding that there will be no adverse effects on any Natura site. It can be assumed that there would be no in-combination effects with Phase 1 and 2.

6.1.5. Power Lines

Uprate of the existing Bellacorick to Castlebar 110kV overhead line – the NIS concluded that the proposed development would not have any significant impacts on the integrity of the Natura sites in the area. The Board granted planning permission; the inspector's report concluded that the proposed development would not adversely affect the integrity of European sites.

Uprate of the existing Bellacorick to Moy 110kV overhead line – the NIS concluded that with mitigation in place impacts were not considered to be likely to have a significant effect on the structure and function of Bellacorick Bog Complex SAC.

Uprate/Refurbishment of the Bellacorick to Bangor Erris 38kV overhead line – the NIS concluded that provided the mitigation measures in the NIS were fully implemented, no significant adverse impacts are expected on the qualifying interests of the Carrowmore Lake Complex SAC, Owenduff Nephin Complex SPA or Bellacorick Bog Complex SAC or any other European site.

There is no potential for in-combination effects on any Natura 2000 site, when phase 1 and 2 of the project is considered, with the three power line projects.

6.1.6. Substation

An application for minor modification of the Bellacorick 110kV substation has been made. A screening assessment prepared by the proposer concluded that the works pose no potential for significant effects on the conservation objectives of Bellacorick Bog Complex SAC. It can be concluded that there would be no in-combination effects on any Natura 2000 site when the Oweninny wind farm project is considered with the substation project.

6.1.7. Grid 25/ Grid West

The RES noted that a 400kV line will be required to harness the county's natural resources and to achieve the policies and objectives of the strategy. Underground and overhead options for the Grid West project were published in a report in July 2015. This report, which was prepared by a Government – appointed Independent Expert Panel

(IEP), sets out in detail, the technical, environmental and cost aspects of three technology options:

- A fully underground direct current cable
- A 400kV overhead line
- A 220kV overhead line with partial use of underground cable.

The project will include a substation / convertor station in north Mayo and a substation / convertor station near Flagford, Co Roscommon.

On receipt of the Grid West Report the IEP responded to the Minister for Communications, Energy and Natural Resources with a positive opinion and assessed that the report was complete and fair. Public consultation will be carried out.

Underground Cable (direct current HVDC) - The specific corridors for the underground cable (UGC) and the overhead line (OHL) options are identified in the report for the IEP. The location for the new 110kV GIS substation in the Moygownagh area (western limit of Grid West project), is approximately 6km distance from the northeast boundary of the Oweninny site.

This option has potential to impact on two Natura sites the River Moy SAC and the Tullaghanrock Bog SAC. The potential impacts and effects of the final design on European designated sites will be considered in detail in the AA process as required under Article 6(3) of the EU Habitats Directive.

River Moy SAC - As no part of phase 1 and 2 is within the Deel catchment the project would not contribute to in-combination effects with Grid West.

Tullaghanrock SAC is 60km from the subject site and there is no potential for in-combination effects with Grid West.

Bird species - The underground route does not impact on any SPA site. The route passes through one regular wintering Whooper Swan site. Sensitive sites for wintering birds along the route are identified for Whooper Swan, Greenland white-fronted Geese and Hen Harrier; at considerable distances from the subject site; with no evidence that the birds commute north-westwards towards the subject site. It is considered inconceivable that there would be cumulative impact on these populations from the project.

There is no potential for in-combination effects with Grid West underground HVDC on Natura 2000 sites or Annex 1 listed birds.

400kV overhead line (HVAC) - This option has potential to impact on two Natura sites the River Moy SAC and the Cloonshanville Bog SAC. The potential impacts and effects of the final design on European designated sites will be considered in detail in the AA process as required under Article 6(3) of the EU Habitats Directive.

River Moy SAC - As no part of phase 1 and 2 is within the Deel catchment, the project would not contribute to in-combination effects with Grid West.

Cloonshanville Bog SAC is 80km from the subject site and therefore there is no potential for in-combination effects with Grid West.

Bird species - The overhead line does not impact on any SPA site. The route passes through areas with breeding bird species of high conservation concern, potentially sensitive to the development. As breeding birds remain close to the nesting location through the nesting season, there is no potential that the Oweninny development could contribute to in-combination effects on breeding birds with Grid West.

Key locations along the route are identified from the winter birds surveys; these are at considerable distances from the subject site, with no evidence that the birds commute north-westwards towards the subject site. It is considered inconceivable that there would be cumulative impact on these populations from the project.

There is no potential for in-combination effects with Grid West 400kV overhead line on Natura 2000 sites or Annex 1 listed birds.

The indicative 220kV overhead line and partial underground cable (HVAC), for the overhead section follows the same routing principles as the 400k overhead line option. It incorporates an additional 2km section of UGC at north Mayo and up to an additional 20km UGC mid-section. For the overhead section the same environmental analysis and mitigation measures apply as those which apply to the 400k overhead line. For the partial underground cable, the mitigation measures outlined for the (HVDC) underground cable apply.

6.1.8. Conclusion

The conclusion reached in the revised NIS is that while the proposed phase 1 and phase 2 of the Oweninny wind farm project could potentially have impacts on four European sites: Bellacorick Bog Complex SAC, Bellacorick Iron Flush SAC, Carrowmore Lake SAC and River Moy SAC; sensitive design along with the rigorous mitigation measures proposed will ensure that the project, either alone or in-combination with other projects, will have no significant adverse impacts on the conservation objectives of these European sites.

6.2. Revised EIS

Further information in respect of the environmental impacts of phases 1 and 2 only, i.e.without phase 3, is provided.

6.2.1. EIS Format

The EIS contains a non- technical summary and a Supplemental EIS which outlines the changes to the previous EIS and has attached a single appendix, similar to Volume 2A (Main Text) of the original EIS.

Appendix 1 follows the format of the previous EIS and is divided into the following chapters:

Chapter 1	-	Introduction
Chapter 2	-	Description
Chapter 3	-	Project Implementation
Chapter 4	-	Alternatives
Chapter 5	-	Policy and Planning
Chapter 6	-	Human Beings
Chapter 7	-	Noise
Chapter 8	-	Shadow Flicker
Chapter 9	-	Terrestrial Ecology
Chapter 10	-	Water Quality, Fisheries and Aquatic Ecology
Chapter 11	-	Landscape
Chapter 12	-	Air Quality & Climate
Chapter 13	-	Geology & Soils
Chapter 14	-	Traffic & Transport
Chapter 15	-	Forestry
Chapter 16	-	Material Assets
Chapter 17	-	Cultural Heritage
Chapter 18	-	Iron Flush Hydrological & Hydrogeological Assessment
Chapter 19	-	Hydrology & Sediment
Chapter 20	-	Indirect and Interaction of Impacts

The Supplemental EIS states that:

EIS chapters have been reviewed to include updates covering the period of 2 years since the preparation of the original EIS.

Updates relate mainly to external factors such as new information published by public agencies. Summaries of the most relevant information in the witness statements and clarifications provided during cross questioning at the oral hearing are provided where necessary.

It concludes that phases 1 and 2 are capable of proceeding independently of phase 3, and that the environmental effects in this scenario generally constitute a reduction in potential environmental impacts when compared with phases 1, 2 and 3 as evaluated in the original EIS. In no instance has an impact been found to be greater than in the original EIS.

The changes to the previous EIS to be noted (from Appendix 1) are:

Chapter 1 introduction states that the red line boundary remains unchanged.

Since the application was made some changes have occurred with respect to existing projects and some additional projects have entered the planning process. The cumulative impact of these has been assessed and is included for Phase 1 and Phase 2. Clarifications on issues raised by third parties were provided at the Oweninny Wind Farm oral hearing. The assessment of Phase 1 and Phase 2 includes the clarification information (where relevant).

The exclusion of phase 3 will result in a reduction in the length of access track to 49km, in the number of turbines from 112 to 61, in the number of substations: no. 1 and no. 2 only, and in the number of Met masts from 8 to 6.

The development footprint will occupy 2.3% of the site.

The electricity is fed via cables down the tower and then via underground cables to electrical transformers where it is transformed to a higher voltage for supply to the National Grid.

Rated electrical output is expected to be up to 172 megawatts.

The issues identified through stakeholder and public consultation and addressed in the Oweninny Wind Farm EIS remain current and no additional consultation was undertaken with respect to the assessment of Phase 1 and Phase 2 only.

Re. other developments in the area, some changes have occurred with respect to existing projects and some additional projects have entered the planning process.

The Coillte Cluddaun Wind Farm Development has been refused planning permission.

EirGrid proposed modification of the existing Bellacorick substation with Mayo Co Co..

EirGrid proposed uprating of the Bellacorick to Castlebar 110kV overhead line – Bellacorick substation to Castlebar substation; permission granted.

EirGrid uprate of the existing Bellacorick to Moy 110kV overhead line – notification of decision to permit.

ESB Networks Refurbishment / Uprate of the Bellacorick to Bangor Erris 38kV overhead line, application lodged with Mayo County Council.

Proposed Wind Farm at Tawnanasool – decision to refuse appealed.

Proposed Meteorological Mast at Sheskin for ABO Wind Ireland Limited granted temporary permission for three years.

Grid West Project - EirGrid published the Government – appointed Independent Expert Panel (IEP), report and accompanying appendices in July 2015. The Grid West options assessed in the report include:

- A 400kV overhead line with 400kV substations
- A 220kV overhead line with 200kV substations,
- A HVDC underground cable with Inverter Stations.

A cumulative impact assessment of each of these projects is included for the Phase 1 and Phase 2 development under each heading as appropriate.

6.2.2. Human beings

Re Noise - the EIS states that distances from turbine to nearest dwelling ensure that noise impacts of significance will not arise from construction or operation. Adherence to DEHLG guidelines will ensure that noise is unlikely to be a significant problem at any residence located around the site. Cumulative impact with the approved Corvoderry wind farm will not exceed noise limits and no significant impact will occur.

Re Shadow Flicker - the EIS states that 12 properties have the potential to be affected, but below the recommended guideline limit of 30 hours per annum. The limit of 30 minutes per day could be exceeded at one location at times of the year when the sun is statistically less likely to be shining. If valid evidence of shadow flicker is produced, there will be appropriate mitigation e.g. pre-programming selected turbines to prevent their operation on dates and times when shadow flicker could cause a nuisance at a particular location, or planting of vegetation close to a residence in order to shield it from shadow flicker.

In relation to photosensitive epilepsy the EIS states:

It has been recommended that the critical flickering frequency should not be above 2.5 Hz, so as to avoid any possible potential to impact upon sufferers of a condition known as photosensitive epilepsy. (The UK National Society for Epilepsy identifies this threshold criterion as being 3 Hz). For a three-bladed wind turbine this is equivalent to a rotational speed of 50 revolutions per minute (rpm). The turbines are likely to operate at a maximum of circa 19 rpm. Therefore, the health impact of flicker frequency is not considered further in this assessment.

6.2.3. Terrestrial Ecology

In addition to the Natura sites there are Natural Heritage Areas designated and proposed within 20km of the subject site.

The site supports a substantial number of remnants of blanket bog. There are other Annex I habitats, besides lowland blanket bog, associated with these remnants: wet heath, dry heath, dystrophic lakes and oligotrophic lakes.

The Bellacorick Iron Flush and O'Boyle's Bog ('county importance') are the most important remnants, other remnants are rated as of local importance higher value (8 remnants) and the remainder are of local importance lower value.

The petrifying spring is a rare habitat with priority status in Annex I of the EU Habitats Directive, (located in the south-eastern corner of the site in the vicinity of T101, i.e. phase 3).

The cutover bog is rated as of local importance lower value, but this is expected to increase in the medium to long term.

There is evidence of otter, badger, common frog, common lizard, pine marten, Irish hare, bat species, and 29 bird species of conservation importance recorded on the site.

Sensitive design has ensured that the wind farm infrastructure is outside areas rated as of ecological importance, especially the areas of relatively intact bog and the hen harrier winter roost site. In particular the project design and appropriate mitigation will ensure that sites designated for nature conservation, both within the site and in adjoining areas, are not affected in any way, directly or indirectly. The mitigation followed has been avoidance, which is considered the best form of mitigation for projects in ecologically sensitive areas.

6.2.4. Aquatic Ecology

Cumulative impacts with other projects has been considered. Each of these projects will have passed through environmental assessment and the planning process and will

be required to implement detailed pollution control measures during construction, operation and decommissioning; and significant cumulative impacts are not expected.

6.2.5. Landscape

The visual effects of a wind farm will depend upon the distance of the observer from the wind farm, with visibility decreasing significantly over 5 to 20km. With other forms of development, low visibility correlates to low visual effects and the less a development is seen, the more positive the impact. With respect to wind farms however, of greater importance than the extent of visibility in determining visual effects, is the nature of the visibility i.e. how a wind farm is seen within the landscape, for example, whether it appears balanced within the visual composition of a view, whether it creates a focal point or if it blends into the background. The phase 1 and phase 2 development will form two sections to the east and west separated by the Oweninny River. The centre of the study area is characterised by open and unimpeded panoramic views across a smooth and uniform landscape which lacks significant vertical landmarks and results in a sense of openness, emptiness, remoteness and isolation. Mountain ranges enclosing the basin to three sides provide a backdrop on the horizon anchoring the scenery when looking north, west and south.

The proposed development will result in generally medium landscape effects and moderate to substantial visual effects. The majority of available open views will be experienced from within the proposed wind farm site, within approx. 8km of its boundary and from mountain summits and slopes located to the north, west and south, facing the proposed development. The openness of short and long distance views will remain, due to the spacing of the turbines in relation to each other and due to the large scale and uniformity of the landscape. Turbines can appear higher than the mountain backdrop in some views to the west and south. Sections of mountains will then be seen through the turbines, interfering with their ridgelines and minimising the scale of their presence. These effects are localised and limited to locations within the wind farm site or in close proximity to the development. The punctuation of verticality will structure the landscape, removing the currently empty characteristic but retaining its openness and underlying basin character.

Long distance views, beyond 15km of the centre of the wind farm site, will experience generally slight to moderate visual effects and low landscape effects. Sections of the wind farm would form small moving features within a wide panorama. Visibility, particularly beyond 15km, will depend on clear weather conditions.

Cumulative effects will be experienced with other windfarms: an increase in density of vertical elements in the landscape and strengthening of the presence of wind farm

development within available views. In the majority of available views the windfarms will not be distinguishable from one another and will be seen as one unit.

The majority of recreation and tourism routes are located outside the primary principal visual zone and will experience slight to moderate effects or no effects due to intervening topography.

Substantial visual effects will occur in close proximity to the wind farm site.

The wind farm will alter the landscape and visual character within the landscape basin, in the centre of the study area, due to its extent and height. Considering the large scale of the surrounding, generally homogeneous, landscape, the introduction of the wind farm will not be perceived as being out of context with the overall underlying landscape character. The proposed development will result in a sustained presence of vertical man-made elements, which will form a new landmark over time.

6.2.6. Air & Climate

Renewable electricity from the development would displace electricity generated from non-renewable sources. A life cycle analysis of the CO^2 displacement, over the project 30 year operational horizon of phase 1 and phase 2 indicate that the carbon footprint and fossil carbon saved would be as follows:

Carbon footprint	383,815 tonnes co_2
Fossil carbon saved	6,908,441 tonnes co_2
Carbon emitted	5.56% of the carbon saved
Carbon payback period	1.67 years.

Annual equivalent air emissions displaced from fossil fuel combustion are: carbon dioxide 213,804t, sulphur dioxide 3,490t and oxides of nitrogen 2,015t.

The development of renewable energy and, particularly in Ireland, wind energy with zero emissions, is seen as an essential element in achieving reductions in emissions, while allowing continuing economic expansion.

6.2.7. Traffic and Transport

Re. construction deliveries, it is estimated that 33,222 cubic metres of concrete will be required for phase 1 and a further 30,180 and 56,430 cubic metres for phases 2 and phase 3 respectively. In the worst case scenario all concrete will be imported to site. It is expected that 6 to 8 concrete vehicles per hour would be the maximum number of deliveries associated with any single turbine foundation construction or concrete piling operation, that would be practical from a construction aspect; equating to an additional

16HGV movements per hour on the N59. On days of foundation pours, the duration of increased traffic movement, would extend from between 10 to 14 hours.

It is estimated that 196,153 cubic metres of crushed stone will be required for phase 1 and a further 206,175 cubic metres for phase 2. The borrow pit could yield up to 340,000 cubic metres.

Traffic and transport impacts on the N59 will occur mainly during the construction phase. The existing capacity of the N59 is adequate to cater for the additional traffic movements generated, with a residual capacity of 50% throughout construction.

Cumulative impacts show adequate carrying capacity on the N59. With implementation of the mitigation measures no residual significant impact is predicted.

6.2.8. Forestry

The loss of 1.05ha is of minimal significance in the context of the site area and the Coillte Shannetra Forest Management Plan area with 2,529ha of forest, managed for timber production.

6.2.9. Electricity Supply

The SEAI estimates that each additional megawatt of installed wind capacity generates in one year the equivalent electricity consumed by 525 average homes for the same period. The electricity generated at Oweninny will be the equivalent to the annual consumption of 90,300 homes. A common assertion by opponents of wind power is that as much energy is consumed in the manufacturing and installing wind turbines as they subsequently produce. However, the average wind farm will pay back the energy used in its manufacture within 3-5 months of commencement of operation. This is dependent on turbine size and wind speeds. Larger turbines such as those proposed at Oweninny will have longer pay back times, up to 8 months for example. This means that over its operating life an onshore turbine is expected to recover multiples of the input energy required. This takes account of energy associated with maintenance of the wind farm as well as the losses that are inherently part of electricity transmission and distribution systems.

6.2.10. Hydrogeology and the Bellacorick Iron Flush

It was categorically demonstrated at the oral hearing that there would be no impact from the construction activities associated with wind turbines or access tracks or from the extraction of materials from the borrow pit, on the hydrology of Bellacorick Iron Flush.

6.2.11. Conclusion

With the application of various mitigation measures, there are no impacts that are considered unacceptable within the context of the planning policy framework for assessing wind energy projects. It is therefore concluded that the proposed wind farm is supported by government policy regarding the promotion of renewable energy and is consistent with planning guidance for the development of wind energy.

7. Submissions

7.1. Planning Authority Report - Mayo County Counci

7.1.1. Policy

Policy updates since their last report.

The current County Development Plan 2014-2020 was adopted since their last report, details given.

The Connaught Ulster Region Waste Management Plan 2015-2021 was adopted since their last report. This includes:

> The region will promote sustainable waste management treatment in keeping with the waste hierarchy and the move towards a circular economy and greater self - sufficiency.
>
> Apply the relevant environmental and planning legislation to waste activities in order to protect the environment, in particular European sites and human health, against adverse impacts of waste generated.

7.1.2. Flood Risk

There is no history of flooding relevant to the site.

7.1.3. Water Framework Directive and Associated Regulations.

Section 10 of the Supplemental EIS 'Water and Aquatic Ecology' deals with the Water Quality Directive the subject site is located in the Western River Basin District and is governed by the Western River Basin District – River Basin Management Plan 2009 - 2015. The detailed measures needed to achieve the environmental objectives established in river basin management plans are set down in the Surface Water Environmental Objectives Regulations (S.I. No. 272/2009) and the Surface Water

Environmental Objectives Regulations (S.I. No. 9/2010). Western River Basin Management Objectives for the river water bodies draining the Oweninny site are to achieve at least good status, and prevent deterioration of existing good and high quality status. Section 10 of the EIS highlights the potential for impact on water quality, however unlike the peat harvesting operations, only a small fraction of the site will be disturbed by construction. Potential sediment and other polluting substances will be controlled by the mitigation measures set out in Section 19 of the EIS and good engineering construction practice.

7.1.4. Appropriate Assessment under the Habitats Directive.

Having reviewed the revised NIS the Council comments are:

The Council is of the opinion that the assessment methodology and detail presented does not meet the normal requirements of a NIS.

The analyses presented have not been undertaken with reference to the potential for adverse effects on the European sites, in view of the implications for the sites' conservation objectives.

The conclusions of the NIS lack clarity and precision regarding whether or not there will be adverse effects on the integrity of a European site.

Conclusions such as '*any significant adverse impact on the potentially affected qualifying interests namely natural dystrophic lakes and ponds, northern altlantic wet heaths with Erica tetralix, Blanket Bog (active only), Depressions on peat substrates of the Rhyncosporion and Alkaline fens, would be of concern*' and other similarly phrased conclusions exclude a reference to the sites '*conservations objectives'* and the implications of same as a consequence of the proposed development alone or in-combination.

Significant effects were deemed likely, possible or uncertain following the screening stage. Therefore, the NIS should comprise the analysis of the potential of these effects to result in adverse impacts on the European sites, in view of their conservation objectives, not solely on each protected habitat and/or species.

Section 2.2 provides inadequate detail on the site description. The site is described as '*largely cutover/cutaway bog land*', but the location and extent of the remnant bog areas have not been definitively illustrated (apart from no. 46). Since the remnant bog sites are stated to contain wet heath, dry heaths, fens and flushes, it should be confirmed if any of these habitats correspond to Annex 1 habitats. This is a vital consideration in the assessment of the impacts of the proposed development on both annex I Habitats

which may not be afforded protection within a designated European site, and also on the habitats or species listed at Annex II and V of the EU Habitats Directive and the Wildlife Acts, 1976 and 2000.

Insufficient detail has been provided on the habitat type which will be lost due to the construction of the proposed new access tracks, aside from the selection of a route with minimal peat soil depth and avoidance of very wet areas, it should be stated that any areas to be used to construct access tracks do not correspond to Annex I habitats, if this is the case.

In relation to potential impacts, insufficient detail, required for an NIS, has been provided on other indirect and secondary effects.

No reference was made to noise pollution during construction and operation or loss/fragmentation of fen, heath or peat.

Bat species were not referred to in the assessment of the secondary development for bridge upgrade / construction.

These should all be referred to in this section, prior to the prescribing of mitigation measures. Significant adverse impacts on qualifying interests is not the same as implications for European sites as a whole as a consequence of the effects of the proposed development, in view of the sites' conservation objectives.

The NIS states in relation to in-combination effects, that there may remain potential for in-combination / cumulative effects, though adverse effects from other separate plans and projects were not deemed likely. However in Section 3.5.9 reference is made to the fact that the proposed development will have a slight impact on bog remnant No.9 of the Bord na Móna Bog Rehabilitation Programme with cross reference to Section 9.4.2 (*note this should read 9.5.2*) of the EIS. Since there is a slight impact identified, the NIS should contain the information from section 9.4.2 of the EIS.

The species surveys undertaken within and outside of designated / classified sites, detailed in the associated EIS, should be included in the NIS as there may be species listed in Annex IV/V of the EU Habitats Directive and Wildlife Act 1976 and 2000 which require conservation / protection by way of mitigation measures and may inadvertently have been overlooked.

It is not evident from the NIS, in dealing with the in-combination effects, whether the focused surveys of Greenland white-fronted geese, to be conducted in 2014/15 winter season (*referenced in para. 3.5.8 Grid 25/Grid West*) have been carried out and

whether the findings are of relevance to the current proposed development and its assessment.

The relocation of five turbines was suggested by the Department due to the potential for adverse impacts on the Formoyle flush. It was concluded that there is a hydrological boundary between these turbines and the iron flush. There would be merit in illustrating the location of each groundwater body to demonstrate their separation.

General mitigation measures with reference to management and maintenance of river/stream silt traps at crossings, accidental spillages and emergency response measures, possible use of bog mats at certain locations, the presence of an on-site ecologist and the induction of all site staff, could also be included as a miscellaneous mitigation measure. A plan for the party / parties responsible for the supervision of mitigation measures, the monitoring of same, the assessment of the measures perceived success and actions to be taken in the case of failure should also be included as part of the mitigation measures section.

The 50m exclusion zone should be indicated by appropriate materials (light posts and stringlines) to prevent any confusion / uncertainty by site staff.

The in-combination effects of the Grid West Proposed Project cannot be feasibly assessed to the required standard, in the absence of a definitive selected route and other specific proposed development details.

There would be merit in illustrating the locations of all stream / river crossings and silt traps, proposed access routes, PSRA 'substantial', 'significant' and 'serious' risk level locations, borrow pit location and settlement ponds, excluding the previously proposed phase 3 project elements, in an appropriately sized drawing, in the revised NIS appendix (similar to its presentation in Figure 1 of the 2013 original NIS).

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, is now the codified version of Directive 79/409/EEC (as amended).

7.1.5. Adequacy of supplemental EIS

The Council is satisfied that the supplemental EIS provides a generally satisfactory description of the receiving environment, the proposed development, its impacts and proposed mitigation measures. It has been accompanied by a non-technical summary and includes the information required by Schedule 6 of the Planning and Development Regulations 2001-2015 and complies with Section 172 of the Planning and Development Acts 2000-2015 and Article 94 of the said Regulations.

The Council is satisfied that the supplemental EIS complies with the Guidelines on Information to be Contained in Environmental Impact Statements (EPA 2002), complies with the Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA 2003); and is satisfied with the content and quality of the EIS as presented and that there are no important omissions.

There are several minor additions which would, in the opinion of the Council, improve the comprehensiveness of the Supplemental EIS.

Ch. 10 – a drawing should be included of the proposed development excluding phase 3 for the purpose of demonstrating the absence of potential for adverse effects on L Dahybaun cSAC given its proximity to the proposed development.

Ch. 18 - a drawing should be included illustrating the location of each groundwater body in the vicinity of the Formoyle Flush showing that the flush and the proposed development are located in separate groundwater catchments. This will support the conclusion that adverse impacts on the Formoyle Flush as a consequence of the proposed development are not deemed likely or feasible due to their separation.

7.1.6. Conclusion

It is clear from the planning application details, the associated EIS, Supplemental EIS and Assessment Report that some environmental impacts will occur during the construction phase of the phase 1 and 2 development. The impacts however are considered to be transient and of a temporary to short-term nature. Where environmental impacts are identified during the construction and operation phase of the development, the EIS and Supplemental EIS as submitted, outline mitigation measures that when implemented will minimise the potential impacts.

The monitoring and mitigation measures outlined throughout the EIS and the Supplemental EIS should be implemented fully as part of the development. In particular, the additional mitigation measures proposed during the ABP oral hearing should be implemented (i.e. the shadow detection and control system within 10 rotor diameter of all existing dwellings which have potential to be impacted by shadow flicker and also the complaints procedures).

It is the view of the Council, having examined the Supplemental EIS, that phases 1 and 2 of the development as originally proposed are capable of proceeding independently of phase 3 and that generally the environmental effects of constructing those phases will constitute a reduction in the potential environmental impacts when compared with phases 1, 2 and 3, as evaluated in the original EIS. The Council concurs with the

conclusions of the Assessment Report that in no instance has an impact been found to be greater than in the original EIS.

Landscape impact: the EIS concludes that the taller turbine option is visible from slightly more areas than the lower turbine option. It is a basic principle that visual impact should be kept to a minimum, therefore Mayo County Council considers that the 100m hub/150m blade tip option, should be the maximum permitted.

Roads: regarding carrying capacity and safety of road network serving the proposed development, providing the Council's road conditions, set out in the appendix attached to the planning authority's report, are included in a permission, traffic safety for road users will not be compromised by the carrying out of the development.

Environment: regarding environmental carrying capacity of the subject site and surrounding area, and the likely significant impact arising from the proposed development, the EIS and the Supplemental EIS identify environmental impacts arising from the development in a reasonably comprehensive manner, and set out in detail proposed mitigation and monitoring measures which, when implemented, will reduce or avoid potential impacts.

Providing the mitigation measures set out in the EIS are carried out, there will be no significant environmental impacts from the carrying out of the development.

7.1.7. View in relation to the decision to be made by the Board:

It is the Council's view that the Board should satisfy itself with regard to the following issues regarding the development proposed, during both the construction and operational phases:

That it complies with national policy (on Energy, Climate Change, Sustainability and the National Spatial Strategy),

That it complies with the West Regional Planning Guidelines,

That it complies with Mayo County Development Plan 2008-2014 and the Mayo Renewable Energy Strategy 20111-2014,

Whether the development will have significant effects on the Natura 2000 sites in the area,

Whether the impact of the development on the amenity of dwellings in the area is acceptable, taking into account the mitigation measures outlined in the EIS in terms of:

- Traffic
- Air quality
- Noise and vibration
- Landscape and visual impact.

Whether the development now proposed will have significant effects on the cultural heritage of the area.

Whether the development as now proposed will have significant effects on the natural heritage of the area in terms of:

- Terrestrial, marine and freshwater ecology,
- Soils, geology, hydrogeology and hydrology

Whether the development as now proposed will have significant effects on the material assets of the area in terms of:

- Existing land use
- Use of natural resources.

That the development now proposed meets the highest international standards in terms of engineering design, construction and safety of the general public.

It is the view of Mayo County Council that, having regard to the planning history of the site, the decision to be made by the Board is essentially whether it considers the change from a development of 180 wind turbines generating 320Mw of electricity to one of 61 wind turbines generating 172Mw of electricity or that the planning implications of that change are so different or of such magnitude that the Board should reach a different conclusion to that of P01/2542, ABP Ref PL 16.131260.

7.1.8. Conditions:

Regarding the planning authority view on conditions which should be attached in the event of the Board deciding to grant permission; conditions should be attached covering the following general concerns:

- Provision for agreement with Mayo County Council,
- Project Monitoring,
- Environmental Protection,
- Establishing a complaints Register,
- Roads, Transportation and Traffic Management,
- Control of Waste,
- Sanitary Waste Facilities and Management,

- Construction in Peatland,
- Natural Heritage,
- Archaeology,
- Noise & Air Quality,
- Protection of the Amenities of the Area,
- Financial Conditions,
- Community Gain.

The text of conditions recommended for attachment by the Board is included in the planning authority's report.

7.1.9. Community Gain

Where a particular infrastructure development is required in the greater national interest (and by definition such developments are likely to be long term) local communities accommodating major infrastructure should derive some measure of community gain.

A policy on Community Benefit Contributions required for certain major developments was adopted by the Council on the 4th April 2014 as official Council policy. The Community Benefits Contributions will be used to fund projects and services in the local community over and above those required to be provided by the local authority.

The life-span of the proposed development is stated to be 30 years or more. The Council considers it reasonable that the developer should contribute towards the cost of environmental, recreational or community amenities which will help mitigate the long term impact of the development, therefore a community gain condition is appropriate. The condition included in the planning authority's draft conditions sets the contribution at €10,000 per installed MW per annum.

7.1.10. Development Contributions

Details are set out of relevant Section 48 development contribution scheme conditions which should be attached: the scheme of 2004 covers surface water services, amenities, roads, footpaths & public lighting, community open space & recreational facilities and car parking. The only category not applicable is car parking, which is all on-site. The contribution amount is unspecified.

Details are set out of special contribution conditions which should be attached along with detailed calculations and justification for the conditions. A special development contribution will be required in respect of the road strengthening, widening and realignment of the haul roads serving the site. The amount of contribution cannot be determined at this point in time as it is dependent on the carrying out of a road condition

survey and consequent pavement design, based on the proposed axel loading of both the construction and future traffic. Payment of a special development contribution should be specified by condition.

7.1.11. Recommendation

Planning Authority's overall considered view of the proposal:

Planning history: while the Bog Rehabilitation Plan required by the EPA as part of the IPPC licence granted to Bord na Móna, has improved the land to some extent since peat production ceased, the site remains degraded. Mayo County Council is cognisant of the fact that there is an existing windfarm of 21 turbines on part of this site and that there is extant planning permission on this site for some 180 wind turbines as well as a further 10 turbines located within the site in separate ownership. The council's view is that the use of the land as a windfarm has been established and the proposed use is acceptable.

National regional and local policy on Renewable Energy: the site is designated a priority area in the Mayo Renewable Energy Strategy. The proposed development complies with national, regional and local policy on renewable energy.

Visual impact: it is the considered view of the Council that, on balance, the significant benefits accruing from this major infrastructure development, in terms of greenhouse gas avoidance, the advancement of national renewable targets, security of energy supply and contribution to the national economy, when set within a contained geographical area on what is a brownfield site, outweighs the perceived adverse visual impact. It is the considered view of the Council that in the interests of minimising the visual impact of the development the 100m hub/150m blade tip option should be the maximum permitted. Turbine transformers should be located within the turbine tower. Detailed design, materials and finish shall be agreed with Mayo County Council.

Impact on roads infrastructure: the primary impact will occur during the 4 year construction period (2016-2020). The development will be phased with an average of 15 turbines per annum being constructed, therefore construction traffic impact will be intermittent rather than continuous with regard to large and wide loads. The national secondary route N59 will be regularly used during construction. The EIS indicates that the N59 will have sufficient capacity to accommodate cumulative construction traffic from three windfarms.

Impact is essentially concerned with road damage and traffic management. A roads and bridge survey on the N59 prior to commencement would establish what works are required and the suitability of the regional road network. Mitigation of traffic impacts

includes the preparation of a traffic management plan. It is the considered view of the Council that subject to mitigation measures proposed in the EIS the proposed development will not have a significant impact on the roads infrastructure and traffic safety in the area.

Impact on the environment: the EIS identifies comprehensively potential environmental impacts arising from the development, and sets out in detail proposed mitigation which, when implemented, will reduce or avoid significant environmental impacts. It is the considered view of the Council that subject to the mitigation measures proposed in the EIS and Supplemental EIS the proposed development will not have a significant impact on the environment in the area.

Impact on residential amenities: construction noise can be controlled through adherence to BS 5228 Code of Practice for Noise Control on Construction and Open Sites. Longer term impacts arise from noise, shadow flicker and electro-magnetic interference. Noise prediction at the noise sensitive locations appears to indicate that both by itself and in conjunction with the adjoining windfarms, the predicted noise levels will comply with the requirements of the DECLG Wind Energy Guidelines 2006.

The shadow flicker analysis suggests that 8 houses have the potential to be affected by shadow flicker with turbines of 112m rotor diameter (56m blades and hub heights of 120m), and 12 houses have the potential to be affected by turbines of 120m rotor diameter (60m blades and hub height of 116m). The guidelines recommend that shadow flicker should not exceed 30 hours/annum or 30 mins/day. The supplemental EIS calculates that the predicted shadow flicker at all of the potentially affected houses will be significantly below the recommended limit. One site could potentially experience an exceedence of the recommended shadow flicker per day although the possibility is confined to a number of days in winter when the sun is statistically less likely to be shining. No significant cumulative impact will occur with the Corvoderry windfarm or the single turbine at Dooleague.

Conclusion: the proposed development should be granted permission subject to the schedule of conditions which the Council regard as an essential minimum.

7.1.12. Reports from Sections within the Council

Reports from sections within Mayo County Council, included in the overall report, are attached to the submission.

7.1.13. Senior Executive Scientist, Environment Section

The Senior Executive Scientist reviewed the Supplemental EIS under the headings:

Description of the development
Description of the environment
Scoping, consultation and impact identification
Prediction and evaluation of impacts
Alternatives
Mitigation and monitoring
Non-technical summary
Organisation and presentation of information

and was satisfied with the content and quality and that there were no important omissions; and that both the Supplemental EIS and the original EIS comply with the Guidelines on Information to be Contained in Environmental Impact Statements (EPA 2002), and also complies with the Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA 2003). He accepts the conclusions in Appendix 1 that phases 1 and 2 are capable of proceeding independently of phase 3, and that the environmental effects generally will constitute a reduction in the potential environmental impacts, when compared with the original three phase development.

It is clear from the planning application details, the associated EIS, Supplemental EIS and Assessment Report that some environmental impacts will occur during the construction phase of the phase 1 and 2 development. The impacts however are considered to be transient and of a temporary to short-term nature. Where environmental impacts are identified during the construction and operation phase of the development, the EIS and Supplemental EIS as submitted outline mitigation measures that when implemented will minimise the potential impacts.

The monitoring and mitigation measures, outlined throughout the EIS and the Supplemental EIS, should be implemented fully as part of the development. In particular, the additional mitigation measures proposed during the ABP oral hearing should be implemented.

The applicant should be conditioned to contribute to the costs of the environimental monitoring and inspections to be performed by the Environment Section, Mayo County Council or their agents, during the construction and operational phases.

The development of the Oweninny Wind Farm, if granted planning permission, will make a significant contribution towards meeting the Governments National Renewable Energy Action Plan obligations under the Renewable Energy Directive. It will also contribute towards achieving Ireland's national target of renewable electricity generation and will contribute to national greenhouse gas reduction. The report recommends that planning permission be granted.

7.1.14. Roads Report

A list of 20 conditions is recommended including: a deposit of €150,000 for each phase of the development, to cover the cost of any damage to the public road network as a result of haulage to/from the proposed development; and the payment of €150,000 to Mayo County Council for each phase of the development, as a contribution towards expenditure that is proposed to be incurred by Mayo County Council in respect of road improvements works in the area.

7.1.15. Senior Archaeologist

Supplemental EIS: A substantial number of archaeological assessments and peatland surveys have been carried out over the years on the proposed development site. Furthermore planning permission has been granted for a 180 turbine wind farm and substantial works are in place. The site has also been subject to industrial scale peat production for over half a century.

Conditions:

No groundworks should take place within at least 20m of the external perimeter of any archaeological site or monument and especially within 20m of the site protected in the Record of Monuments and Places (RMP) for Co Mayo.

No groundworks should take place within at least 20m of the external perimeter of any architectural site listed in the EIS submitted with the application.

All archaeological and architectural sites within the proposed development site boundary and their buffer zones should be permanently fenced off under the supervision of a suitably qualified archaeologist.

All proposed works in streams and rivers must be subject to underwater archaeological surveys approved by the National Monuments Section of the Department of Arts, Heritage and the Gaeltacht.

The developer is required to employ a suitably qualified archaeologist to monitor under licence all proposed groundworks associated with this development. The degree, extent and frequency of the monitoring should be determined by the National Monuments Section of the Department of Arts, Heritage and the Gaeltacht and agreed to by the licensed archaeologist. All geotechnical trial holes and associated works must also be monitored by a suitably qualified licensed archaeologist.

Should arahaeological features or small finds be uncovered during the course of monitoring, the archaeologist shall have work on the site stopped, pending a decision as

to how best to deal with the archaeology. The developer shall be prepared to be advised by the National Monuments Section of the Department of Arts, Heritage and the Gaeltacht and the National Museum of Ireland with regard to any necessary mitigation action, (e.g. preservation in situ, or excavation) and should facilitate the archaeologist in recording any material found.

The Planning Authority, the Monuments Section of the Department of Arts, Heritage and the Gaeltacht and the National Museum of Ireland shall be furnished with a report describing the results of the monitoring.

7.1.16. Dr Karol Donnelly BScPhD

NIS

The NIS is not sufficiently methodical or detailed. The analyses have not been undertaken with reference to the potential for adverse effects on the European sites. Conclusions lack clarity and precision regarding whether or not there will be adverse effects on the integrity of a European site. Significant effects were deemed likely, possible or uncertain following the screening stage. Therefore the NIS should comprise the analysis of the potential of these affects to result in adverse impacts on the sites; not solely on each protected habitat and/or species.

Dr Donnelly has concern that the concept of appropriate assessment is not understood; an AA is undertaken by a competent authority, taking account of the NIS.

The proposed description is thorough and comprehensive. The location and extent of the remnant bog areas, apart from No 46, have not been definitively illustrated. Since these are stated to contain wet heath, dry heaths, fens and flushes, it should be confirmed if any of these habitats correspond to Annex 1 habitats. This is a vital consideration in the assessment of the impacts of the proposed development on both annex I Habitats, which may not be afforded protection within a designated European site, and also on the habitats or species listed at Annex II and V of the EU Habitats Directive and the Wildlife Acts, 1976 and 2000.

Little detail has been provided on the habitat type which will be lost due to the construction of the proposed new access tracks (57km x 5.5m x 0.8m), aside from the selection of a route with minimal peat soil depth and avoidance of very wet areas, it should be stated that any areas to be used to construct access tracks do not correspond to Annex I habitats, if this is the case.

Peat slippage has been cited as the main adverse effect, in addition to potential for impacts on groundwater flow/recharge and water quality deterioration. Other indirect

and secondary effects have not been sufficiently dealt with in section 3.3 in as much detail as required for an NIS. No reference was made to noise pollution during construction and operation or loss/fragmentation of fen, heath or peat. Bat species were not referred to in the assessment of the secondary development for bridge upgrade/construction. These should all be referred to in this section, prior to the prescribing of mitigation measures. Similar to previous comment, significant adverse impacts on qualifying interests is not the same as implications for European sites as a whole, as a consequence of the effects of the proposed development, in view of the sites' conservation objectives.

The NIS states in Section 3.5 that there may remain potential for in-combination / cumulative effects, though adverse effects from other separate plans and projects were not deemed likely. The proposed development has been considered unlikely to result in adverse in-combination effects with the Bord na Móna Bog Rehabilitation Programme. The examination of the in-combination effects with the Bord na Móna Bog Rehabilitation Programme has not detailed the extent of bog remnant No.9 which will be slightly impacted, (section 9.4.5 of the EIS).

The species surveys undertaken within and outside of designated /classified sites, detailed in the associated EIS should be included in the NIS as there may be species listed in Annex IV/V of the EU Habitats Directive and Wildlife Act 1976 and 2000 which require conservation/protection by way of mitigation measures and may inadvertently have been overlooked.

A recommendation was made[2] that focused surveys of Greenland white-fronted geese to be conducted in 2014/15 winter season. It is not stated if these surveys have been carried out and whether the findings are of relevance to the current proposed development and its assessment.

The relocation of five turbines (T13, T14, T24, T29 and T30) was suggested by the Department due to the potential for adverse impacts on the Formoyle flush. It was concluded that there is a hydrological boundary between these turbines and the iron flush. There would be merit in illustrating the location of each groundwater body, to demonstrate their separation.

Mitigation measures have been segregated into categories for various elements of the proposed development. However general mitigation measures with reference to management and maintenance of river/stream silt traps at crossings, accidental spillages and emergency response measures, possible use of bog mats at certain

[2] This is referred to elsewhere as a recommendation in relation to another project Grid West.

locations, the presence of an on-site ecologist and the induction of all site staff, could also be included as miscellaneous mitigation. A plan for the party/parties responsible for the supervision of mitigation measures, the monitoring of same, the assessment of the measures perceived success, and actions to be taken in the case of failure, should also be included as part of the mitigation measures section.

The 50m exclusion zone around the Bellacorrick Iron Flush cSAC boundary should be indicated by appropriate materials (light posts and stringlines) to prevent any confusion / uncertainty by site staff.

The in-combination effects of the Grid West Proposed Project cannot be feasibly assessed to the required standard, in the absence of a definitive selected route and other specific proposed development details.

There would be merit in illustrating the locations of all stream / river crossings and silt traps, proposed access routes, PSRA 'substantial', 'significant' and 'serious' risk level locations, borrow pit location and settlement ponds excluding the previously proposed phase 3 project elements, in an appropriately sized drawing, in the revised NIS appendix (similar to its presentation in Figure 1 of the 2013 original NIS).

Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds is now the codified version of Directive 79/409/EEC (as amended).

EIS

Ch 9 Terrestrial Ecology – it is concurred that the change in status from green list to amber list and amber list to red list for a number of bird species is not considered significant, to result in any adverse effects which were not previously identified (during preparation of EIS in 2013). However no reference has been made to the proposed 2014/15 focused survey for Greenland white-fronted geese, (see previous footnote in relation to this survey).

Ch 9 Water and Aquatic Ecology – there would be merit in including a drawing of the proposed development, excluding the phase 3, particularly for the purpose of demonstrating the absence of potential for adverse effects on L Dahybaun cSAC due to the proposed development.

Ch 18 Hydrology and Hydrogeology Iron Flush Area – Adverse impacts on Formoyle Flush, within the Bellacorrick Bog Complex cSAC, as a consequence of the proposed development, now excluding phase 3, are not deemed likely or feasible due to the conclusion that they are located in separate groundwater catchments. There would be

merit in illustrating the location of each groundwater body to demonstrate this separation.

A considerable amount of research, including surveys and ongoing monitoring has been undertaken and is proposed for the proposed development area. Additionally mitigation measures, proposed in 2013 have not necessitated updating or supplementation, due to the exclusion of phase 3 of the proposed development.

Adequacy of supplemental EIS

The Council is satisfied that the supplemental EIS provides a generally satisfactory description of the receiving environment, the proposed development, its impacts and proposed mitigation measures. It has been accompanied by a non-technical summary and includes the information required by Schedule 6 of the Planning and Development Regulations 2001-2015 and complies with Section 172 of the Planning and Development Acts 2000-2015 and Article 94 of the said Regulations.

The Council is satisfied that the supplemental EIS complies with the Guidelines on Information to be Contained in Environmental Impact Statements (EPA 2002), complies with the Advice Notes on Current Practice in the Preparation of Environmental Impact Statements (EPA 2003); and is satisfied with the content and quality of the EIS as presented, and that there are no important omissions.

There are several minor additions which would, in the opinion of the Council, improve the comprehensiveness of the Supplemental EIS.

It seems that it is the case that the exclusion of phase 3 from the proposed development at this point will likely result in the reduction of the potential for adverse effects particularly on the Lough Dahybaun cSAC and its associated avian species.

7.1.17. A/CFO

Fire Safety Certificate and Commencement Notice are required.

7.1. Prescribed Bodies

7.2. Department of Arts, Heritage and the Gaeltacht

Part XAB of the Planning and Development Act, 2000, as amended, defines an NIS as a statement, for the purposes of Article 6(3) of the Habitats Directive, of the implications of the proposed development, on its own and in combination with other plans and projects, for European sites in view of the conservation objectives of these sites. It is required to include a report of a scientific examination of evidence and data, carried out

to identify and classify any implications for the conservation objectives of European sites.

The current conservation objectives are generic, version 4.0 and dated 13/02/15 in the case of Bellacorick Iron Flush cSAC, Bellacorick Bog Complex cSAC, Carrrowmore Lake Complex cSAC, Lough Dahybaun cSAC, Owenduff/Nephin Complex cSAC and Owenduff/Nephin Complex SPA. The objectives are '*to maintain or restore the favourable conservation condition*' of the listed Annex I habitats and Annex II species of the SACs (i.e. the qualifying interests), and of the listed special conservation interests of the SPA's.

Some coastal sites have site specific conservation objectives e.g. Blacksod Bay/Broadhaven Bay SPA (site code 004037) and Killala Bay/Moy Estuary SPA (site code 004036). In the absence of site-specific conservation objectives, and where Annex I habitats and Annex II species of relevance to the appropriate assessment are in unfavourable status at a national level, a precautionary approach should be adopted in the interpretation of the generic conservation objectives. The Board should note that *'favourable conservation condition'* is directly linked with '*favourable conservation status*' which is defined for habitats and species in Article I of the Habitats Directive, and included in the generic conservation objectives.

Revised NIS

The revised NIS submitted by the applicant contains no new scientific information or analysis to address issues previously raised by the Department for the Board's consideration. The Board is again advised that:

1. the NIS was not sufficiently detailed or specific in relation to the process by which it determined what conservation objectives, if any, are at risk from the project, on its own and in combination with other plans and projects,

2. the NIS did not adequately present the scientific assessments of those risks, and

3. it had not been shown that conservation objectives (generic in the case of nearby European sites) were used in the screening process.

When carrying out the appropriate assessment, the Board will need to refer to data and analysis that are available only in the EIS and supplemental EIS, e.g. hydrogeological investigations and assessments undertaken in the case of flushes in Bellacorick Iron Flush cSAC and Bellacorick Bog Complex cSAC and bird survey data on which the screening element of the NIS was based. Further reasoned scientific assessment and analysis will be required to understand and reach a determination in respect of the

implications of the project for the conservation objectives and integrity of European sites. Note that site integrity is defined by its conservation objectives and its conservation condition. The assessment that must be carried out cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the project on the European sites. The points raised below in relation to the details of the project, including the mitigation measures, should also be noted.

Bellacorick Iron Flush cSAC

A scientific assessment of the likely effects of the project, on its own and in combination with other plans and projects, on the qualifying interest, Marsh Saxifrage is lacking in the NIS, as is clear and robust conclusion as to the implications of the project for the conservation objectives and integrity of that site. In addition to maintaining or restoring the range and population of the species at the site on a long-term basis, a sufficiently large area of habitat, with its structure and functions intact, needs to be maintained. The applicant's NIS (Section 3.2.2) says the habitat in which it (Marsh Saxifrage) is found is typical for the species, though the ground is drier than on other location. This fen is surrounded by extensive areas of commercially cut peat and drains that have caused a lowering of the water table, resulting in the loss of vegetation associated with wetter areas described in earlier references to the site by King and Scannell (1960). Some of the typical fen species that were present are now absent or scarce (notably the rare mosses Homalothecium nitens and Meesia triquetra) and the vegetation shows trends towards drier, more acidic species. Without further studies, it is unknown if the drying out of the flush and the lack of grazing will affect the survival of the species.

The hydrological and hydrogeological assessments which were carried out are not fully integrated with the NIS, and will require scrutiny in the context of the current status and trends of the species' population and habitat area and functions; as well as in the context of any additional or altered effects from the nearby quarrying (17ha), including wet quarrying, turbine base excavations, and other features.

The assessment that is carried out must be capable of removing all reasonable scientific doubt as to the effects of the project on this European site. In this regard, definitive conclusions must be reached as to the implications of all parts of the project, including the quarrying and the excavations of turbine bases (notably T13, T14, T24, T29 and T30) for the water table and the water supply of Bellacorick Iron Flush cSAC.

Birds and SPAs

While the size and scale of the proposed development have been reduced, and the adjoining Cluddaun Windfarm development has now been refused, the Department

notes that no new data and analysis are presented in relation to potential significant effects on birds and SPAs in the applicant's current NIS and supplemental EIS. Accordingly, the Department's earlier observations in relation to the likely effects on birds and SPAs, particularly those at the oral hearing, are reiterated and should be addressed when the EIS and appropriate assessment are carried out. The key species and species groups of concern are the Birds Directive Annex I species, Greenland White-fronted Goose, Whoopper Swan and Hen Harrier, and breeding waders (see Copland et al 2011).

How the applicant has determined in the NIS that the proposed development, on its own or in combination with other plans or project, poses no risks of significant effects on SPAs in view of their conservation objectives is again queried. This determination appears to have been reached on the basis of bird surveys that were carried out in connection with the project, and by using bird survey data gathered in connection with the EIS. Accordingly, this screening element of the NIS is in effect, an assessment but the Board must rely on the data in the EIS to carry out its assessment and analysis.

In the context of the appropriate assessment, consideration should be given to whether any of the above bird species or species groups are typical species of the habitats that are qualifying interests of the SACs, eg. Blanket bog (active only) and therefore, related to the conservation objectives of those sites. The national report on Article 12 of the Birds Directive will assist in relation to the conservation status of relevant bird species.

EIA

Description, design, mitigation: in the EIA there should be due consideration to any uncertainties that exist in relation to the project description and the details of mitigation measures, including monitoring, taking the following into account:

- Whether the full nature, scale, and location of all parts of the proposed development are known, noting that detailed site investigations are required at a later stage to fully characterise and identify risks relating to peat instability and to optimise the site layout prior to site works commencing.
- Whether the applicant has provided all necessary details of mitigation measures required to address, avoid or reduce identified adverse effects and risks noting, for example that:
    - A CEMP is to be prepared but is not yet available,
    - Work method statements are not yet available and are to be developed at construction stage by contractors;

- A full understanding of some key environmental risks e.g. peat instability, is not yet available,
- The need for a project monitoring committee has been identified by Mayo County Council, with the suggestion that the Department would be represented on such a committee. This Department wishes to point out that it does not have the resources to undertake such a role, and that it is not responsible for monitoring and ensuring compliance with a development during construction,
- The fact that the need for post-construction rehabilitation and post-construction assessment has been identified by the applicant,
- Whether the necessary details of hydrological and vegetation monitoring proposed in respect of Bellacorick Iron Flush cSAC are available, and whether the baseline vegetation and hydrology of the site has been established. It should be noted that monitoring, including repeat visits or intrusive methods, may be damaging and may cause deterioration of habitats or disturbance of species; that will also require assessment,

- Whether, in view of the above, there is certainty or best scientific knowledge regarding the full nature, scale and significance of the residual ecological and environmental effects of the project, and the implications for the conservation objectives and integrity of European sites,
- Whether mitigation measures are sufficiently comprehensive to ensure that it can be demonstrated that the requirements of the Wildlife Acts 1976-2012, will be met with regard to protected species, particularly breeding birds, their nests and unflown young during construction and operational stages of the development, noting that works will occur during the bird nesting season.

Haul Route

The applicant has identified a haul route for the turbines from Killybegs, and has identified that works to Cloongullaun Bridge, on the N26 in Co Mayo, will be required. The applicant has also identified that impacts on the qualifying interests of the European site, River Moy cSAC may result from these works, but the works or alterations required are not yet available. If this aspect of the proposed development is not covered by the current application and made subject to EIA or AA accordingly, it would appear, from the applicant's 'screening' that a planning application to the Council or a section 177AE application to the Board, would be required, in the future. Contrary to what is said in

project documentation, the NPWS of the department will not have a direct role in agreeing or approving proposed development at this location.

7.3. EHO

No additional comments to the report dated 15th August 2013.

7.4. Inland Fisheries Ireland

There will be no structures located within the Oweninny site boundary which are hydraulically connected to the Cloonaghmore or Moy catchments as these are located in Phase 3.

The Owenmore catchment is a renowned salmon, sea trout and brown trout fishery. Salmon stocks are currently under severe pressure in the Owenmore River, the river is not meeting its conservation limit and consequently is only open for salmon on a catch and release bases for 2015 and 2016. Tributaries of the Owenmore River, the Oweninny River and the River Muing which flow through the site have, in the past, been severely impacted by peat harvesting operations. Salmon and trout spawning and nursery habitat were destroyed by large amounts of silt deposited on spawning gravels. Extensive rehabilitation works have been carried out in this catchment and the Owenmore River is recovering as a result of this major initiative. It is imperative that comprehensive silt control measures are strictly implemented throughout the site to ensure that the benefits from the rehabilitation works carried out in this catchment are not lost. Maintaining the water quality and fisheries habitat of this catchment must be paramount during the development, operation and decommissioning phases of the project. If permission is granted for this proposed development, it is extremely important that a number of comprehensive conditions are attached in order to ensure full protection of sensitive salmonid spawning and nursery habitat.

Water Framework Directive

The fundamental objectives are to maintain the high status of waters where it exists, to prevent further deterioration in existing status and to ensure that all waters achieve good status, in compliance with the Surface Water Regulations (2009) and the Groundwater Regulations (2010). These regulations impose a duty on all relevant authorities to undertake their functions in a manner that ensures compliance with the objectives of the relevant River Basin Management Plans (RBMP). All water bodies of the Owenmore River catchment in this area have been allocated ‘good ecological status’ in the Western River Basin Management Plans (WRBMP), except for the River Muing, which has been allocated ‘moderate ecological status’ and must be restored to

good ecological status by 2021. The proposed development must not prevent the achievement of this goal.

Peat Stability, Drainage and Mitigation.

Depths of peat range from 0.0m to 3.0m. Erosion of sediment to the aquatic environment could generate elevated suspended solids affecting the Oweninny / Owenmore catchment. 90% of the construction area is located in either 'insignificant' or 'significant' risk areas. Development should be avoided in 'substantial' risk areas unless the strict mitigation measures provided in the EIS are put in place. These must ensure that no peat enters watercourses with hydrological connectivity to the Oweninny / Owenmore catchment. Pollution with suspended solids, through surface drainage water from the peat repository, is also of concern. Sediment loss to the receiving rivers would pose a significant risk to salmonid spawning and nursery areas and to juvenile fish. The erosion and sediment control plan prepared for the site must be fully implemented. First-stage treatment at each structure should include settlement ponds and/or lagoons, followed by second-stage SuDS measures between the structure and the nearest watercourse/river. Drainage arising from paved surfaces within the Electrical Substation, Visitor Centre and transformer bunds should be discharged through an appropriate hydrocarbon interceptor before entering the site drainage system. For the operational phase, the programme of regular cleaning, maintenance and inspection of the site runoff treatment system should continue. This must include inspection of the sediment protection measures, removal and disposal of any collected sediment, as described for the construction phase. It is imperative that the erosion and sediment control plan is strictly implemented throughout the site during the construction and operational phases of this development, to ensure that the fisheries habitat and water quality improvements, achieved from the rehabilitation works carried out in the Owenmore catchment, are not lost.

Fuel/Oil Storage and Bunding

The proposed arrangements for the storage of fuels/oils is welcomed. All refuelling should be carried out within a secure bunded area on-site, in order to reduce any risk of release of hydrocarbons to adjacent watercourses and groundwater. Fuel/oil storage should be bunded. Adequate stocks of oil spillage control equipment, including absorbent booms should be in place at designated locations to contain any accidental spillages. Drip trays must also be employed. All vehicles and machinery must be inspected for leaks, daily.

Concrete and Cement

The quantity of concrete for phases 1 and 2 is estimated as in the region of 63,402 cubic metres, this could result in major impact on the receiving waters, including extensive fish kills and loss of other aquatic flora and fauna. Cement is directly toxic to aquatic life. Relatively small quantities can have a significant impact. Strict mitigation measures must be implemented when using concrete. Poured concrete must be protected from rainfall during curing. All surface water runoff from the curing concrete must be prevented from directly entering surface water drainage.

The cement batching plant will be located a distance of approx 550m from the nearest stream, a first order tributary of the Oweninny/Owenmore River. Section 3.4.2 of the Assessment of Alternative Option Phase 1 and Phase 2 only, states that '*water will be extracted from nearby existing water sources on site and will be stored in a designated water storage area*'. It is unclear what this existing water source is and what impact this abstraction will have on adjacent water bodies and/or the Owenmore River catchment. All runoff from the concrete batching area, washout area and concrete truck loading facilities must be directed to the three stage water recycler. Water from this recycler should be recycled back into the concrete batching plant process or used for washout facilities. Maintenance of the surface water control system must be carried out on a regular basis and monitored daily. Surface water must be strictly controlled on the site and internal drainage and storage facilities designed to take into account severe rainfall and flood events. The site must be designed and constructed such that clean surface water, including roof runoff, is diverted away from contaminated areas and directed to a surface water discharge system.

Location of wind turbines near rivers:

All wind turbines should be located at least 100m from the main channel of the Oweninny/Owenmore rivers and their primary tributaries.

Access tracks, stream crossings and culverts:

Silt implementation measures must be implemented.

Considering the large amount of crushed stone and other aggregates to be imported not being met by the borrow pit, the imported material has the potential to alter the pH of water runoff from the site and the pH of the local environment. It is recommended that material of local provenance, consistent with onsite geology, is sourced for this purpose.

A number of culverts are to be removed or replaced. Culverts can have a significant impact on freshwater habitats. Fish passage upstream and downstream can be affected by culverts, if not designed and installed correctly; resulting in physical or

hydrological barriers. IFI must be consulted in relation to all of the proposed river and stream crossings / culvert installation / bridge construction or upgrading. IFI favours the use of bottomless culverts or clear span bridges for river crossings. Fisheries enhancement works may be required at these sites and should be considered during consultation with IFI. Culverts must be designed and installed in accordance with the IFI publication 'Requirements for the Protection of Fisheries Habitat during Construction and Development Works at River Sites'. Any in-stream works should be carried out between May and October during dry weather conditions.

Construction and Environmental Management Plan (CEMP)

This must outline the work practices, environmental management procedures, and management responsibilities in relation to construction of Oweninny Wind Farm. The Plan must set out all measures necessary to ensure that works are carried out in accordance with the regulatory and statutory requirements, as well as the mitigation measures which must ensure no damage to fisheries habitat or water quality. IFI should be copied with the plan for comment, one month prior to commencement of works. Amongst items to be addressed are:

- Control of fuels and oils
- Management of spoil storage areas
- Pollution contingency plan
- Drainage control measures
- Control of concrete/cement
- Silt/sediment management
- Forest harvesting operations
- Invasive species management

Method statements:

Method statements must be submitted to IFI one month prior to commencement of development. IFI will review and may recommend amendments. Comprehensive mitigation measures and emergency response procedures must be integrated into all method statements.

Forestry:

Only approx. 1.05ha of forestry will be impacted. A section of the Sheskin river catchment has been identified as being 'at risk' from forestry siltation and eutrophication in the Western River Basin Management Plan. The Forestry and Water Quality Guidelines must be strictly adhered to and all felling carried out subject to a felling licence.

Environmental Monitoring:

Water quality monitoring must be implemented, with suspended solids and turbidity as mandatory parameters; others may be required to be added should there be any indication of other types of pollutants. The results to be forwarded to IFI weekly or in real time format if possible. An Environmental Monitoring Committeee should be established including a representative from IFI.

Emergency Reponse Plan

This must be immediately activated in the event of a major spill or other pollution incident. A copy of this plan should be provided to the construction contractor, site supervision personnel and operation personnel. IFI should be a notifiable body.

Invasive Species

Measures should be put in place to prevent the spread of invasive species as a result of these works; to be included in the construction and environmental management plan. IFI guidance is provided, including bio-security protocol, available at: http://www.fisheriesireland.ie/Research/invasive-species.html

7.5. Transport Infrastructure Ireland

This is further to previous submissions from NRA; the previous submission made on 22nd August 2013 is referenced, and a copy is attached. The position outlined in that submission remains the same.

Operational issues to be considered prior to the implementation of any permitted scheme are outlined.

Haul route

Regarding the turbine haul route, any works to the national road network may require approval under S53 of the Roads Act 2007, prior to commencement.

The scheme promoter is advised that consultation should be had with all PPP Scheme operators on the preferred turbine delivery route to address operational requirements such as delivery timetabling, potential costs and associated requirements.

Structures

Any operator who wants to transport a vehicle or load whose weight falls outside the limits allowed by the Road Traffic (Construction Equipment & Use of Vehicles)

Regulations 2003, SI 5 of 2003, must obtain a permit for its movement from each Local Authority through whose jurisdiction the vehicle will travel.

All structures along the haul route should be checked by the applicant/developer to confirm their capacity to accommodate any abnormal loads proposed.

The road authorities along the haul route should confirm their acceptance of proposals in this regard.

Transport Infrastructure Ireland requests referral of all proposals impacting on the national road network, agreed between the road authorities and the applicant.

Cabling/trenching

A licence may be required from the road authority for any trenching or cabling proposals on the road network. Transport Infrastructure Ireland requests referral of all proposals agreed between the road authorities and the applicant, impacting on the national road network.

7.6. Observers

The following observers have made a submission(s) to the Board following publication of notice of receipt of the significant additional information.

Ardagh Protection Group
Hugh Broderick
Corvoderra Group
Crossmolina Protection Group
Jon Freestone and Nuala O'Malley
Gerard Gallagher
Mollie Gallagher
Mary Gordon
Michael Harding, Mary Christina Harding and Thomas Mangan
Valentina and Declan Keating
Knockmore Action Committee Against Pylons
Dermot McDonnell
Mary McLoughlin
Moy Valley Protection Group
Moygownagh Kilfian Community and Landscape Protection Group
John G Moyles Snr & Others
Dermot O'Donnell
Ronan O'Donnell

Residents of Shanvolahan
The Swans and the Snails Ltd
Padraic Timlin

The issues raised in the submissions could be summarised as follows:

7.6.1. Application Process/Validity

The cancellation of phase 3 eliminates half the project and the original project must be refused. The revised project must be subject to complete planning process including an assessment of whether the project as revised is or is not strategic infrastructure. In addition the new project should go through all other relevant planning process including an oral hearing.

The development site may contain illegal dumps from the time that Bord na Móna was operating the site for milled peat production: plastic sheeting, scrap metal, machinery parts, tyres, railway sleepers, oil drums, rubber belts, etc. The Board should not grant planning permission on a site that contains an illegal development.

The developer engaged in an abuse of process by seeking an extension of the previous planning permission, even though it has no intention of proceeding with the development. This development is no longer economically viable. The current planning permission is contrary to planning law. No further permission can be granted.

The developer relies for a grid connection on the uprating of the Bellacorick to Castlebar and Bellacorick to Ballina lines. The uprating of these lines is part of the development and must be included to avoid project splitting.

Case 2015/545 JR Sweetman v An Bord Pleanála, concerning the uprating of the power line between Bellacorick and Castlebar is brought to attention; and the statement of grounds is attached to many of the submissions. The case is listed for hearing on the 16th March 2016.

Article 3 of the EIA Directive states: '*The environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a project on the following factors'*. The connection to the grid is a direct effect of this development.

Following the decision of O'Grianna v An Bord Pleanála, developers of wind farm projects must now assess all works which will form part of the overall project at planning application stage. This includes grid connection, the substation, haul routes and any borrow pits.

Eirgrid have applied for uprating of the Bellacorick to Castlebar 110kv line and the Bellacorick to Moy (Ballina) 110kv line. Observers consider that these developments are an integral part of the same overall state owned energy infrastructure project along with Oweninny, Cluddaun and Grid West Project. Observers consider that the reason these 110kv lines are being uprated is to enable these lines to be in a position to transport out the power produced by the Oweninny and other undetermined wind farms which have not yet entered the planning process. This is confirmed by the record of the meeting between the developer and the Board in March 22nd 2012. This is project splitting and not in accordance with planning law.

There are a number of dwellings close to the existing power lines. It isn't fair that the community has been given no information of where overhead line poles or towers will be situated.

Observer is concerned at the uprating of the powerline which crosses his land within 5 metres of his property; not 400m as is the stated distance to the nearest house. Observer has fears in relation to health.

Grid West - There is no definite location for the sub-station, the routing of associated 400kv line or whether this line will be underground or overground; and no EIS or EIA has been done.

The set-back distance of 400m from dwellings (for power lines) is not acceptable given the known health risks associated with electro magnetic fields.

Knockmore, Ardagh, Moygownagh, Kilfian and Foxford, within the Moy Valley, may be subject to additional high voltage lines or uprates to the existing transmission system as a result of this new Oweninny proposal. This will have negative impacts on their communities, landscape and social capital and land and property values. The proposal is about bringing unnecessary, intermittent and costly electricity generation out of the county with no benefit to local communities or environment.

If Oweninny is now proposed to be substantially changed, bearing in mind earlier phases of it that exist, the foundation reinstatement conditions are in the process of being breached.

The developer is not in a position to supply the additional information, as a result planning permission should be refused. If the Board did not have sufficient information to grant planning permission, and nothing further has been supplied, they cannot now be in a position to grant permission.

The Board did not give the choice to the developer of either submitting the information or submitting a revised project. The actions of the developer are an abuse of process.

7.6.2. Adequacy of Information

In pre planning meetings, the Board stressed the importance of markers on the ground to show the position of the proposed turbines. The developer's response was that lengths of plastic pipe, extending up to 6 feet, were in place. The vast majority of people did not see these posts. The few who did, stated that they were no more than 2x2 inches extending no more than 4 feet above ground. They cannot be seen from outside the site. The request by the Board was not complied with, permission should not be granted.

Observer objects that no temporary structures have been put in place to show persons bordering the site the exact size and scale of the turbines.

The EIS and NIS do not take account of the current status of the development site, scientific advances since the reports were written, and when the relevant field work was done. The field work was done in 2010 and is 5 years old. The Board cannot rely on this work. Significant advances have been made in the study of wind farms and their effect on flora and fauna, and most importantly humans, since the documentation was prepared. Scientific underpinning no longer exists. The economic foundation and government policies claimed to support the project are four years out of date.

Where overhead power line poles or towers will be situated has not been included in the application. Permission should not be granted in the absence of such information.

The drawings are not in accordance with Article 23 of the Planning and Development Regulations 2001. The process is flawed, permission should not be granted.

It is clear from the amount of additional information that the original application omitted a large amount of information.

7.6.3. Access to Information

The Board was not equitable and even handed in their treatment of the developer and the public, in terms of making information equally available. At their meeting on Tuesday the 6th March 2012, with Mayo County Council, they stated that they would make details of their discussions available to the developer at the first meeting with him, March 22nd 2012, but only to the general public when the process had been completed, 22nd December. This excluded the public from the process for 6 months. The process is flawed, permission cannot be granted.

The Board erred in its letter to the developer on 12th February 2013, by not including Sligo County Council in the list of bodies; the wind farm will have a visual impact on the people of Sligo and on designated viewing points in Sligo. The same may apply to Leitrim and Donegal as it is probable that the windfarm would be visible in these counties. Permission cannot be granted.

The public were not consulted about the positioning of phase 1 and 2 only.

No real consultation has taken place in breach of the Aarhus Convention.

7.6.4. Alternatives

The position of the retained turbines may not represent the optimum position across the total site. No alternative positioning has been considered.

All the alternatives made possible by the elimination of phase 3 were not reviewed; these are further reasons why permission should be refused.

The developer cannot retain the remainder of the site for phase 3 as this would represent project splitting.

7.6.5. Human Beings

Health & Safety - No consideration has been given to the major Bord Gais pipeline running under the site: the health and safety impacts on employees or the public. For this reason planning permission should be refused.

A blade malfunction at a site in Germany caused parts to be thrown 1.3km. The technology used there was much smaller than that proposed.

Shadow Flicker - Observer's house is elevated and the sun sets at the back of his dwelling the turbines will cause shadow flicker.

No house should be close enough to a turbine that shadow flicker is an issue.

Shadow flicker should be eliminated by shutting down turbines.

Turning off turbines in instances of shadow flicker is unacceptable.

Noise - The cumulative noise effect of 61 turbines is a cause of concern.

How can noise be calculated when they do not know the output of the turbines.

Noise will be greater than shown on the map.

No calculated simulation of sound, to allow observer to listen to the cumulative turbine noise, has been made available.

Noise will be constant for the rest of people's lives.

Observer's children have sensitive hearing and are more likely to be affected by noise.

The positioning of the existing turbines on the map Fig 5, Predicted Cumulative Noise Level Contour, is totally incorrect. The existing ones are a much greater distance from observer's home than indicated.

Noise monitoring was carried out at a low level where it was screened by shrubs and tall trees.

Human Health - Observers are concerned about impacts on health and quality of life from shadow flicker of children with albinism and nystagmus (a constant involuntary movement of the eyes from side to side), who live in the area,.

Observers are concerned about health risks including noise pollution, shadow flicker and magnetic fields.

Infrasound will cause health problems.

Traffic - Access to the development is proposed via a direct access off the N59 National Secondary Route and would contravene the DECLG's 2012 Guidelines Spatial Planning and National Roads and Policy objective 38.1.2 of the County Development Plan. The proposed development would create an adverse impact on the National Route at a point where the maximum speed limit applies and would endanger safety by reason of traffic hazard and be contrary to the proper planning and sustainable development of the area.

Observer lives along the main N59 and his residence is on the opposite side of the road to his farm and sheds, the extra traffic will cause major problems in his farming activities.

Traffic will be an average of 44 HGV's every hour. This will impact on observer's commute to work.

7.6.6. Landscape & Visual Effects

Visual Impact - The proposed development, due to its nature and extent in this flat open and exposed landscape, in close proximity to several amenity and heritage features, would seriously impact on the visual amenity and natural character of the area, when viewed from the immediate vicinity of the site and from designated scenic routes

beyond, in both Co Mayo and Co Sligo and possibly in Co's Leitrim and Donegal, and would therefore be contrary to the proper planning and sustainable development of the area.

The proposed development, by reason of its nature and location in or near policy area 2 of the Landscape Protection Policy Area and the Development Impact – Landscape Sensitivity of County Mayo County Development Plan 2014 – 2020, would contravene policy objective LP-01 of the Development Plan, which seeks to recognise and facilitate appropriate development in a manner that has regard to the character and sensitivity of the Landscape and to ensure that development will not have a disproportionate effect on the existing or future character of a landscape in terms of location, design, and visual prominence; and therefore seriously impact on the visual amenity and natural character of the landscape at this location and be contrary to the proper planning and sustainable development of the area.

The height and visual impact will have a negative impact on the whole community.

The set back distances from dwellings, streams and areas of conservation need to take account of the scale of the turbines. The 1000m set back is not sufficient.

The cooling tower was visible from observer's dwelling 7 km away. Turbines will be 300ft taller and overwhelming.

Observer can see the existing windfarm from his house, which is only a fraction of the height of that proposed.

Scale of development in a rural unspoilt region.

The development will have a negative impact on Céide Fields and Downpatrick Head.

Aviation lights in the middle of the countryside are not acceptable.

Regarding photomontages ref. no. E04154N19877 photograph taken at 10.05 and EO3956N9937 photograph taken at 11.20, from two different angles in the Shanvolahan area; it seems strange that the same formation of clouds are in both photos. The turbines are blended into the background to look non-intrusive.

7.6.7. Material Assets and Cultural Heritage

Negative impact on tourism.

Property Value - Property in the area will be devalued.

Similar developments have caused a property valuation decrease of 80%.

The development will prevent land being sold and reduce the planning applications sought.

A valuation report submitted states that planning permission granted for a wind farm has a largely negative effect on the '*appeal and the value'* of the observer's residential property.

Telecommunication - People require telecommunications, interruption of service cannot be tolerated, and should be a condition of planning.

Energy Rating - The scientific evidence predicts far greater energy production, worth billions of euro over the project lifetime, and vastly greater profits for the developers.

The ESB evidence at the oral hearing of wind speed of 9m/s at 100m above ground is in agreement with the 2003 SEAI Wind Atlas and the mean wind speeds quoted by Coillte for their Cluddaun site. The 2013 Wind Atlas, launched in 2015, replaces the 2003 Wind Atlas. It verifies the 33% capacity factor included in the EIS. Observer disagrees with the figures and offers a critique of the figures, (see item F 1 17 Appendix A). Understating capacity will understate energy available.

Based on 50m and 100m figures, the mean speed at 90m is 7.49m/s. A capacity factor of 32.9% is expected for the Vesta V90 3MW turbine with a 90m hub height. That model has the lowest swept area to generating capacity ratio of those considered in the noise analysis. Other turbines would be expected to have a higher capacity factor.

The 2013 Wind Atlas is worthless in so far as it refers to Oweninny. The value for Roughness Length, a surface property that may be considered a proxy for surface friction, is off the scale, and is most likely 1,000 times the true value. Extreme surface friction causes huge amounts of energy to vanish. The Board cannot rely on the 2013 Wind Atlas to validate the 33% capacity factor figure. Independent expert opinion in respect of the true capacity factor should be obtained and published in any decision.

All required calculations that rely on the 33% capacity factor are flawed.

Any environmental statement which is superficial, subjective or non-informative would not comply with the provisions of the Act and result in a final decision being a nullity.

7.6.8. Soil, Water Air & Climate

Drainage - Detailed drainage does not explain how excess runoff from extensive road system and concrete areas, in lieu of natural bog, will be managed.

There will be further displacement of water from the existing bog, where flooding is already a major problem.

7.6.9. Flora Fauna

The development would have a significant environmental effect on flora and fauna in the surrounding areas.

The site is in an area of many designated SACs, the Bellacorick Bog Complex: the best example of lowland blanket bog in the country, and Bellacorick Iron Flush.

It is misleading to state that the project will have no impact on the Bellacorick Iron Flush, bog remnants and the bog rehabilitation project; consider the scale of excavations and the dust from this massive industrial project.

The large badger population on the site is not mentioned. Badgers are known to have excellent hearing and will be affected by the raised noise levels.

There is no calculation of the amount of bird/bat deaths per annum which will occur due to these turbines. Land bordering the site is a SAC and important breeding ground for 29 species of birds of conservation importance.

7.6.10. Community Benefit

The Board has to set the Community Benefit Contributions in line with the amount specified by Mayo County Council.

Observer has issues with the actions of Mayo County Council in regard to the community benefit contribution.

7.6.11. Decommissioning

A budget must be set aside for decommissioning.

7.6.1. Other issues

Cluddaun windfarm has been refused. If one part of an illegally split project has been refused planning permission, to grant this permission cannot be considered proper and sustainable development and is contrary to planning law. Many of the refusal reasons for Cluddaun, apply to Oweninny. The Board should also note that a number of other proposed wind farms have been refused planning permission in the area for reasons applicable to Oweninny.

It was made clear at the oral hearing that no further information would be accepted. Accepting this information discriminates against the observers who took part in the oral hearing.

Observer states that the inspector at the oral hearing directed the applicants to produce certain information in respect of the unbuilt windfarm, with no follow up. Observer requests the Board to examine the audio tapes in this regard.

Observer was also an observer at the Cluddaun hearing and was informed by the inspector on the last day of the hearing that it would likely run until evening and possibly a further day. Within 5 minutes of the end of the final module, the hearings were closed abruptly denying the observer and most of his community the right to make a final written submission.

Observers object to the limited time available to them to make observations, in contrast to the time which was made available to the developer.

The site should no longer be classified as an industrial area. There has been no industrial activity here for years.

The support of the local community can no longer be claimed. Numerous groups have been formed to oppose the development. The developer's claim of support indicates how out of date the proposal now is.

The 2006 guidelines are not useful in considering the height of 176m.

Why is this application allowed before the proposed legislation from the Department of Environment on such development is published?

Ireland is in breach of numerous legal obligations.

Mayo County Council's policies in relation to wind energy are excessive in having much of the county zoned for priority, tier one, tier two and cluster wind farms.

The mode of energy production is out dated and a more effective, less obtrusive means of producing energy would be preferable.

Future generations may not be prepared to invest in a lifetime living in such surroundings.

That there are no permanent jobs adds insult.

8. Planning Policy

There is no policy change or update of particular note since the previous inspector's report.

9. Assessment of Revised Project: Phase 1 and phase 2 only

I have examined and read the documents on file, inspected the site and environs and considered relevant planning policy. Many of the issues raised by in submissions are not new issues and have been considered in the previous inspector's report.

9.1. The Development

The proposed development under consideration in this report, comprises phases 1 and 2 of the development originally proposed. This report is supplementary to the previous inspector's report, and considers only the changes arising as a result of the reduction in scale of the project, issues which arise from the singificant additional information received and the submissions and observations submitted following its receipt; this report should therefore be read in conjunction to the previous inspector's report.

Grid connection for the proposed development is to be provided at the existing Bellacorick substation and via the Bellacorick to Castlebar 110kV overhead line and the Bellacorick to Moy 110kV overhead line: existing components of the transmission network in respect of which separate planning permissions for upgrades have been granted.

Various issues have been raised by observers in relation to Grid West and its possible impact. Grid connection for phase 3, which phase has been withdrawn, would require Grid West to be in place. A planning application for Grid West has not yet been submitted and public consultation is ongoing. To the extent that in-combination effects with Grid West are known, they have been considered in the EIS/NIS and are considered in this assessment.

9.2. Assessment

I consider that the issues which arise subsequent to the Board's request for significant additional information can be dealt with under the headings: principle of the development, process/validity, community gain, access to and adequacy of information; environmental impact assessment and appropriate assessment. The assessment which follows is set out under those headings.

9.1. Principle of the development

No change in the policy context has arisen since the previous report. The proposed development is supported by national and regional policy, by the Mayo County Development Plan and in particular by the Renewable Energy Strategy for Co. Mayo 2011 – 2020 where the site is identifed as a priority area for windfarms.

9.1.1. Process/Validity

Issues raised under this heading are set out at paragraph 8.6.1 above.

I am satisfied that the amendment to the project by the omission of phase 3 does not require a new application. The project still falls within the definition of strategic infrastructure.

Regarding possible dumping within the site, this is a very large peatland site and there may be plastic sheeting, etc, as described, or indeed other forms of illegal dumping within the site. This would not be a reason to refuse planning permission for the proposed development.

The issue of project splitting has been raised: the uprating of existing electricity lines - Bellacorick to Castlebar and Bellacorick to Ballina, which have been the subject of separate planning applications, their relationship with this project, concerns that separate examination of these applications and the subject development is project splitting, and reference to a legal challenge to the Board's decision in one of the applications. These projects, although related to this project and to other projects in the area, are independent developments which have been subject to environmental scrutiny and are considered in the subject application in relation to in-combination effects. I do not consider that the manner of examination of these projects and the subject project constitutes project splitting or that their relationship with the subject project is a reason to refuse this permission or to invalidate the process.

Case 2015/545 JR Sweetman v An Bord Pleanála, concerning the uprating of the power line between Bellacorick and Castlebar has been brought to the Board's attention. The statement of grounds is attached to many of the submissions. This ongoing legal process refers to a separate project and, notwithstanding its relationship with the subject development, should not be a reason to refuse permission.

Article 3 of the EIA Directive, the O'Grianna judgement and the requirement to assess all works which will form part of the overall project at planning application stage, including 'grid connection, substation, haul routes and any borrow pits', has been the

subject of observations. In my opinion these matters have been addressed adequately in this application.

The issue of project splitting has been raised in relation to phase 3, i.e. the development within Oweninny lands which has been removed from the subject application. Phase 3 has been removed since the project didn't include the grid connection for that phase. The removal of phase 3 therefore arises from necessity and not from deliberate project splitting. Project splitting usually refers to withholding part of an application in order to avoid considering the environmental implications of a project; in this case the previous environmental impact statement included phase 3. It appears that phase 3 remains a project which the proposers intend to pursue, when the necessary information becomes available to allow full environmental impact assessment to be carried out. In my opinion, this is not project splitting.

Observers state that the Board did not give the choice to the developer of either submitting the information or submitting a revised project. Although not stated as an option in the Board's letter requesting additional information, the significant additional information submitted addresses the concerns raised in the Board's additional information request and is therefore a reasonable response.

9.1.2. Community Gain

The significant additional information contains additional information in relation to community gain which is referred to in the section of Appendix 1, on 'human beings', (p6-16).

The proposers intend that a regulated independent grant making body would be retained to administer and distribute the community support funds. This body would work within an agreed framework and would manage approval committees, prepare and evaluate applications for funding, distribute funds to selected projects. A detailed control framework would be put in place and the grant making body would:

- Promote and publicise the fund and the application process through local partnerships, community associations and local media,
- Provide application forms and web application for funding projects,
- Assess all applications to the community support funds within a specified time frame,
- Notify successful and unsuccessful applicants,
- Provide Oweninny Power Ltd with a project appraisal document outlining the projects for funding,

- Recommend the area of benefit for the fund in conjunction with the local community,
- Support Oweninny Power Limited in setting up a local Community Liaison Committee if required,
- Provide evidence of project completion and success and provide Oweninny Power Limited with a follow up report. Notify successful and unsuccessful applicants,
- Provide Oweninny Power Limited with a project appraisal document outlining the projects for funding,
- Recommend the Area of Benefit for the fund in conjunction with the local community,
- Promote and assist Oweninny Power Limited in public relations events in the local community,
- Support Oweninny Power Limited in setting up a local Community Liaison Committee if required,
- Provide evidence of project completion and success and provide Oweninny Power Limited with a follow up report,
- Evaluate the impact of the support fund on the local community, and
- Provide Oweninny Power Limited with annual accounts for audit.

Community Gain is referred to in the in the previous inspector's report, and is the subject of one of the conditions recommended for inclusion by the Board in that report. I consider that the condition, as previously drafted, is appropriate, notwithstanding the detailed proposals which have been put forward by the applicant in the significant additional information.

9.1.3. Adequacy of Information/ Access to Information

Observer's have raised an issue regarding the availability of information from pre SID meetings which they state excluded the public from the process for 6 months causing the process to be flawed such that permission cannot be granted. The relevant legislation is the Planning and Development (Strategic Infrastructure) Act 2006. Section 37B of the Act refers to pre application consultations. Section 37(c) (3) requires the Board to keep a record of any consultations and to place a copy of such record with any planning application in respect of the proposed development. The Planning and Development Regulations 2006 also refer. Article 210 requires the Board to give notice to the relevant planning authority of a request to enter into pre-application consultations. The Boards website states as follows in relation to Public Participation in Strategic Infrastructure Development, how the public will be kept informed of these consultations: where a request for consultations is received by the Board, the Board will include the request in its weekly list of cases received; it will also be posted on its website; when the consultations have been concluded, the Board will include it in its weekly list of

cases determined and post it on its website; and the Board's file which will include records of any meetings held with prospective applicants during this phase will be available for inspection and purchase when the consultations have concluded. The process in this case accords with the Act and Regulations and has followed the procedure, as laid out by the Board.

Regarding the concern raised in observations, that Sligo County Council and other local authorities, should have been included in the list of bodies informed of the application, since the wind farm will have a visual impact on areas outside Co Mayo, and similarly in relation to Leitrim and Donegal. The prescribed authorities are set out Article 213 (1) (2006 Regulations) and include (c) the planning authority for the area (or planning authorities) in which the proposed development would be situated and (h) where the area of any local authority might be affected by the development - that local authority. In this case the Board took the view that, other than Mayo County Council, no other local authority would be affected by the project.

Observer's have raised as an issue, that the information contained in the application is out of date: scientific advances have been made since the reports were written, the relevant field work done is now 5 years old; significant advances have been made in the study of wind farms and their effect on flora and fauna, and humans, since the documentation was prepared; scientific underpinning no longer exists; and the economic foundation and government policies, claimed to support the project, are four years out of date. Evidence to support the assertions has not been submitted; in my opinion the information contained in the application is not out of date.

The adequacy of the drawings has been questioned. The record of the third pre-application meeting between An Bord Pleanála and Oweninny Power Limited refers to drawings. The Board stated that the scale of maps and drawings that should be submitted is not specified in the Planning and Develoment (Strategic Infrastructure) Act 2006, so the Planning and Development Regulations, 2001 would be the guide; but due to the scale involved the Board stated that site drawings could have a scale of 1:2,500. '*The prospective applicant will also submit composite maps to identify roads and other features, and provide cross-sections of roads and turbines'*. I am satisfied as to the adequacy of the drawings submitted, that the scale at which each drawing is presented is appropriate, allows a clear understanding of the project and that the various scales at which drawings are presented takes account of the large extent of the site involved.

Concerns have been raised regarding public consultation: that the public was not consulted about the positioning of phase 1 and 2 only; that the development now under consideration is part of the development in respect of which consultations took place; and that in breach of the Aarhus Convention no real consultation has taken place. I am

satisfied that adequate public consultation has taken place and in this regard the application process is itself part of the consultative process.

Concerns have been raised regarding the acceptance of further information following the oral hearing, which observers state discriminates against those who took part in the oral hearing. It is a matter for the Board to determine whether or not additional information is required or should be accepted.

Concerns have been raised in relation to the conduct of the oral hearing. I would draw the Board's attention to the recording of the hearing.

Observers have raised concerns regarding the limited time available to them to make observations, in contrast to the greater time which was available to the developer. The time limit for submitting observations was extended by one month, in response to observers' requests.

Observers have referred to the Cluddaun decision as setting a precedent which the Board should follow in this case. Although sharing a common boundary there are many significant differences between the sites. The Cluddaun decision has little bearing on this application.

9.2. Environmental Impact Assessment

9.2.1. Adequacy of the EIS

I wish to advise the Board that in my opinion the information contained in an EIS complies with article 94 of the 2001 Planning and Development Regulations, and that the information available to the Board, which includes: that submitted with the application, written submissions, evidence presented at the oral hearing, the significant additional information and responses thereto and various other sources of information, such as the NPWS web site, is adequate for the carrying out of Environmental Impact Assessment for the development described as phase 1 and phase 2.

With regard to the significant additional information received, changes to the project which arise have the effect of lessening environmental impacts. This assessment is a supplementary assessment which only addresses matters of relevance arising from the changes contained in the significant additional information and submissions and observations received. Other than the new information/issues which have arisen in relation to the significant additional information and are dealt with in this assessment, this report relies on the Environmental Impact Assessment in the previous inspector's report.

9.2.1. New Issues

Many of the issues raised by observers regarding human health, noise, shadow flicker, health and safety, site drainage, landscape and visual impacts, property value, interruption to telecommunications services, negative impact on the tourism potential of the area and energy rating are not new issues arising from the significant additional information, and were considered in the environmental impact assessment in the previous inspector's report.

Many of the items in the planning authority's report and in submissions from prescribed authorities were stated in previous submissions or do not arise as a result of the significant additional information.

Items of relevance in the significant additional information and observations and submissions received are referred to hereunder.

9.2.2. Human Beings

Traffic impact is raised as a concern by observers, and some of the detail in chapter 14 of the supplementary EIS is additional or different to that in the previous EIS. The existing flow capacity of the N59 in the vicinity of the application site, based on the NRA's *'Design Manual for Roads and Bridges: Road Link Design TD 9/12 (2012),* corrected for the width of the road and for pinch points, yields an estimated capacity (AADT) of 5,731, rather than the 5,781 stated in the previous EIS. Estimated Existing Demand (AADT) and available capacity are given separately for the N59 east of the site and west of the site. Estimated Existing Demand (AADT) east of the site is 1,410 and 2,068 west of the site, resulting in available capacity of 78% to the east and 64% to the west. Previously the single figure for Existing Demand (AADT) was 1,181, and available capacity was 79%.

The supplementary EIS considers the impact of various scenarios on traffic, including with and without the borrow pit and concrete batching plant and with multiple traffic generating operations co-inciding: Tables 14.4 to 14.8 refer. Reserve capacity on the N59 to the east and west of the site, in various different scenarios is set out in tables 14.10 to 14.13.

Cumulative impacts with other projects is assessed, including additional projects not previously considered: uprating of the existing Bellacorick to Castlebar 110kV overhead line and the existing Bellacorick to Moy 110kV overhead line, and the proposed Wind Farm at Tawnanasool. In relation to the latter project, significant potential impacts, arising from the the laying of an underground cable along the public road, and the associated potential for traffic impact, is raised but considered unlikely; with reliance on

reasonable project management and public enforcement to avoid traffic disruption. Subject to mititation in relation to the Tawnanasool project the EIS considers that all the additional projects, in combination with the proposed project and the other projects could be accommodated within the capacity of the road network. Planning permission for the Tawnanasool project has since been refused, and any potential impacts which might have arisen from the laying of the roadside underground cable, do not now arise.

The EIS acknowledges that increase in traffic flows on the N59, resulting from the proposed development, is likely to be in the order of 6 -12% on an average day and up to 17% on higher than average days such as during concrete pours etc. A 17% increase in traffic is likely to result in an increase in journey times and increased delay at junctions; with greatest impact near the construction accesses.

It is clear from the EIS that there is adequate capacity on the road network to cater for the construction traffic which would be generated by the development. Traffic impact should not be a reason to refuse permission.

9.2.3. Flora Fauna

Any concerns which may have arisen in relation to the freshwater pearl mussel recorded in the River Deel (downstream from the confluence of the Deel and the Shalvolahan Rivers, approximately 8km from the site), no longer arise, since the removal of phase 3 from the project, also removes from consideration development within the site, which drains to the Moy catchment.

The potential to disturb the wintering Hen Harriers (up to 6 individuals) roosting at a regular night time roost on the ridge to the north-east of L Dahybaun, was considered in some detail in the EIS submitted previously and in the previous inspector's report. Arising from the significant additional information received, the removal of phase 3 from the project, removes those elements of the project which were closest to L Dahybaun and the wintering Hen Harriers night time roost, so that disturbance to wintering Hen Harriers is of less concern.

In relation to impact on bog remnants, impacts which were considered in the environmental impact assessment in the previous inspector's report, to be likely to affect bog remnants nos 23 and 34, do not now arise.

In relation to the other remnant no. 9, which is referred to by Dr Donnelly, in the planning authority submission, this issue was considered in the previous inspector's report.

Regarding Dr Donnelly's concerns that the location and extent of the remnant bog areas, have not been definitively illustrated, and that it should be confirmed if any of these habitats correspond to Annex 1 habitats, Appendix 9B of the original EIS titled

'Terrestrial Ecology' contains in tabular form, information on all the bog remnants with a number assigned to each remnant, a brief description of each, its approximate area and its ecological importance. Figure 9.2 in chapter 9 of the EIS is a map showing the 46 bog remnants, each with an identifying number corresponding to the number in the table. Figure 9.1 is a map showing the all the habitats within the site and the proposed locations of features of the project (turbines etc). Appendix 9A lists the vegetation description for each turbine and substation location. Dr Donnelly states that the description of the site in the NIS is inadequate and questions whether or not there will be any impact on Annex I habitats or Annex II habitats or species. The Annex I habitat 'petrifying spring' is identified in the EIS (previous and revised) and was referred to in the previous inspector's report. Its description/assessment is appropriately located in the EIS rather than the NIS as it is not part of a SAC.

Dr Donnelly states that indirect effects have not been adequately addressed in the NIS and she refers to indirect affect on bats, from work to a bridge. The significant additional information includes in the NIS reference to a haul route and to works which may be required to Cloongullaun Bridge, in the River Moy SAC. It should be noted that the conservation objectives for the SAC do not refer to any species of bat. The EIS refers to mitigation in relation to bats. It is proposed, to survey any bridges to be upgraded/maintained for bat presence, (9.6.16.3). If bats are found, subject to safety considerations, some crevices beneath the bridge will be retained for their continued use. Any re-pointing or pressure grouting will only proceed after an inspection and in accordance with statutory procedures. I consider this mitigation acceptable.

9.2.1. Soil Water Air & Climate

Proposed mitigation in relation to development in areas of substantial risk, stated to comprise 10% of the development (EIS chapter 13), is set out in the NIS (3.4.1.3). Detailed site investigation will be undertaken prior to site works commencing, considering peat depths, peat strengths and peat base slopes down slope of the works. The site layout will be optimised following the detailed site investigations to avoid or minimise new risks if identified. A Geotechnical Risk Register will be developed for the site, inclusive of a Zonal Peat Stability Assessment for each turbine/hardstand, length of access track and other infrastructure on the site, in areas which have been identified as having substantial risk, (i.e. a more focused assessment of peat stability carried out following the detailed site investigation).

The Wind Energy Development Guidelines 2006 (at 7.3) advise that as the precise location of turbines may need to be modified in the course of development due to matters such as the wind regime, ground conditions, or heritage concerns, etc. it may be helpful in framing conditions to allow for a degree of flexibility in the final siting of turbines. Having regard to the detailed site investigation proposed in areas of substantial risk I consider that a condition should be attached which requires such

further investigations and provides for the possible micrositing of the development in such areas. In this regard see condition 30 of this report and also note the omission of condition 42 of the previous report, which excluded micrositing of turbines.

9.2.2. Landscape and Visual Impacts

I can confirm that the revised photomontages are a useful aid to visualising the turbines from the locations at which the photographs were taken. As noted in the previous inspector's report, they are of limited assistance unless viewed in this way.

One observer has expressed concers in relation to two photograph / photomontage locations in Shanvolahan. He considers that clouds as a backdrop to turbines causes them to be blended into the background and to look non-intrusive, and he notes the same formation of clouds occuring in the two photos taken after each other with a short lapse of time. As previously stated, the photomontages are a useful aid to visualising the turbines from the locations at which they were taken. They are not useful in visualising the turbines in any other context. I accept that the white clouds in the photographs may reduce the visual impact of the turbines, however using the photomontages at the locations from which they were taken, the viewer would not be misled as to the likely visual impact. It is also worth noting that the removal of phase 3 reduces the visual impact from the two locations referred to.

As stated in the previous inspector's report, the very considerable visual effect that the proposed development will have on the area must be acknowledged, nevertheless I consider that the impact on landscape or visual impacts are not reasons to refuse permission.

9.2.3. Material Assets & Cultural Heritage

Issues have been raised in relation to energy rating, and there is reference to the 2013 Wind Atlas, launched in 2015. With the exception of the references to the recently published 2013 Wind Atlas, the issues of wind speed and energy rating were considered in the environmental impact assessment in the previous inspector's report. The 2013 Wind Atlas does not require any re-consideration of these issues.

9.2.1. Interactions

Nothing of note arises under this heading as a result of the significant additional information.

9.2.1. Conclusion

With regard to the significant additional information received, the changes to the project which arise have the effect of lessening environmental impacts. I consider that reasonable mitigation is proposed in relation to all environmental impacts likely to arise as a result of the proposed development, and that there are no residual impacts in the Environmental Impact Assessment and in particular arising from the significant additional information, that are so significant that they require planning permission to be refused.

9.1. Appropriate Assessment

9.1.1. Further to Significant Additional Information

Further to the appropriate assessment in the previous inspector's report, the significant additional information and submissions received, the natura sites with potential to be impacted remain the same, and the potential impacts arising from the project remain the same.

I am satisfied that the Board, as the competent authority, has sufficient information to carry out its obligations under the Habitats Directives and implementing legislation, to take into consideration the possible effects a project may have, either on its own or in combination with other plans and projects, on Natura 2000 sites, before making a decision on the proposed development, described as phase 1 and phase 2.

The revised NIS refers to a haul route from Killybegs and the Natura sites through which it would pass. In the revised EIS there is reference to alternative haul routes and to one feasible route for the largest blade length proposed, which has been identified (from Killybegs via Swinford); but that two other alternative routes remain for consideration.

It is worth pointing out that the project does not involve developing a route, but proposes utilising existing roadways.

The issues raised by the DAHG in relation to the likely effects on birds and on SPAs, particularly Birds Directive Annex I species: Greenland White-fronted Goose, Whoopper Swan and Hen Harrier, and breeding waders; were referred to in their previous submissions and were considered in the previous inspector's report.

In relation to the DAHG's advice to the Board: that when carrying out the appropriate assessment they will need to refer to data and analysis that are available only in the EIS and supplemental EIS; the appropriate assessment in the previous inspector's report

included reference to data in the EIS and to evidence presented at the oral hearing. This is similar to the information contained in the supplemental EIS.

9.1.2. Screening

The first exercise to be carried out by the Board is screening, in order to determine the Natura sites which should be subject to appropriate assessment. If it cannot be excluded, on the basis of objective information *that the proposed development will have a significant effect on a* Natura *site, either individually or in combination with other plans or projects* in view of the sites conservation objectives, it must be subject to appropriate assessment. Where doubt exists about the risk of a significant effect, an AA must be carried out. In assessing the risk of such effects, the significance must be established in the light of, among other things, the characteristics and specific environmental conditions of the site concerned, and the likely effects of the project. If a project is likely to undermine any of the site's conservation objectives (i.e. objectives that relate to the Birds or Habitats Directives), it must be considered likely to have a significant effect on that site (EC, 2006).

This assessment is a supplementary assessment which only addresses matters of relevance arising from the changes contained in the significant additional information and the submissions and observations received, and reliance is placed on the screening assessment in the previous inspector's report.

The Department of Arts, Heritage and the Gaeltacht have reiterated their concerns in relation to the likely effects on birds and SPAs, and in particular Birds Directive Annex I species: Greenland White-fronted Goose, Whoopper Swan and Hen Harrier, and breeding waders. This was considered in the previous inspector's report.

The screening carried out in the previous inspector's report concluded in relation to the SAC's:

Broadhaven Bay SAC (site code 0472)
Slieve Fyagh Bog SAC (site code 0542)
Glenamoy Bog Complex SAC (site code 0500),

and the SPA's:

Owenduff/Nephin SPA (site code 004098)
Lough Conn & Lough Cullin SPA (site code 004228)
Carrowmore Lake SPA (site code 004052)

Blacksod Bay / Broadhaven Bay SPA (site code 004037)

Killala Bay/Moy Estuary SPA (site code 004036)

Mullet Peninsula SPA (site code 004227)

Duvillaun Islands SPA (site code 004111)

Inishglora and Inishkeeragh SPA (site code 004084)

Inishkea Islands SPA (site code 004004)

Termoncarragh Lake and Annagh Machair SPA (Site code 004093) and

llanmaster SPA (site code 004074),

that the proposed development, individually and in combination with other plans or projects would not be likely to have a significant effect on these sites and that appropriate assessment is not required.

I have considered the the significant additional information and the responses received and I consider it reasonable reach the same conclusion as that reached in the previous report in relation to the foregoing SPA's and SAC's.

Lough Dahybaun SAC

In addition to the foregoing list of sites which were screened out in the previous inspector's report; the revised NIS concludes consideration of Lough Dahybaun SAC at screening stage. The significant additional information removes phase 3 from the project, including all the development within the overall site, which drains to Lough Dahybaun. I therefore consider it reasonable to conclude that the proposed development, individually and in combination with other plans or projects would not be likely to have a significant effect on Lough Dahybaun SAC and that appropriate assessment is not required.

9.1.3. Appropriate Assessment

In the previous inspector's report, appropriate assessment was carried out in respect of six SAC's where potential for impact was identified, in the light of their conservation objectives, and having regard to the characteristics of the proposed development:

Bellacorick Iron Flush SAC (site code 0466)

Lough Dahybaun SAC (site code 02177) (this is no longer included in the list of sites for which appropriate assessment is required, see screening determination above)

Bellacorick Bog Complex SAC (site code 0922)

Owenduff/Nephin SAC (site code 0534)

River Moy SAC (site code 02298)

Carrowmore Lake SAC (site code 0476),

Additional Projects to be Considered

Additional projects which could contribute to in-combination effects on the natura sites and which therefore require to be considered as part of the appropriate assessment, have been identified in the revised NIS:

Tawnanasool Wind Farm, in respect of which an appeal has been lodged, further to the planning authority's decision to refuse permission;

Grid 25/Grid West – in respect of which alternatives aspects of the project have been detailed;

Uprating of Power Lines

Meterological Mast;

Minor Modifications to Bellacorick Substation.

Tawnanasool Wind Farm

Stage 2 Appropriate Assessment was carried out by the proposer for 6 Natura sites, due to potential for negative impact on waterways downstream. Appropriate assessment was carried out by Mayo County Council which concluded that the proposed development on its own or in combination with other plans and projects, would not adversely affect the integrity of a European site. Tawnanasool Wind Farm has been refused permission by the Board (PL16.245355) and the potential for in-combination impacts no longer arises.

Uprate of Power lines

Uprate of the existing Bellacorick to Castlebar 110kV overhead line Pl16.244534 – the Board carried out appropriate assessment and concluded that the proposed development would not adversely affect the integrity of European sites. It can also be stated therefore that there would be no in-combination effects with Phase 1 and 2.

Uprate of the existing Bellacorick to Moy 110kV overhead line 15/45 (Pl16.245415 the appeal to the Board only concerned a development contribution and was dealt with under Section 48); the planning authority carried out appropriate assessment, after requesting further information, seeking advice from their own ecologist, and from an

external planning and environmental consultancy, and having considered two submissions from the DAU DAHG prior to and following the submission of further information. The planning authority determined that the proposed development, on its own or in combination with other plans or projects, would not adversely affect the integrity of a European site and would therefore be in accordance with the proper planning and sustainable development of the area. The detailed report of the Senior Planner which has attached as appendices: a screening report for EIA, and an Appropriate Assessment Report, is on the file. Based on the foregoing I conclude that there would be no in-combination effects with Phase 1 and 2.

15/611 Uprate/Refurbishment of the Bellacorick to Bangor Erris 38kV overhead line, this application has not been determined. A NIS accompanied the application. The planning authority sought further information (16th November 2015) on 8 points which included (points 4 to 8) information in relation to effects as a consequence of the proposed development on the conservation objectives of the Carrowmore Lake Complex cSAC, and further details in relation to proposed mitigation measures and in relation to effects of associated works. Pending a determination by the planning authority in relation to this application it cannot be stated that there would be no in-combination effects with Phase 1 and 2. It should be noted that the subject project is not dependent or reliant on the Uprate/Refurbishment of the Bellacorick to Bangor Erris 38kV overhead line as phase 1 and 2 will connect to the existing Bellacorrick 110 kV substation, and will export via existing 110kV overhead line infrastructure strengthened by Eirgrid, including the Bellacorick to Castlebar and Bellacorick to Moy 110kV overhead lines.

Substation

15/456 - (VC0085 - pre-application SID, also refers, which determined that it was not strategic infrastructure) - an application for minor modification of the Bellacorick 110kV substation, comprising extension of the existing control building and installation of new bay within the existing Bellacorick substation compound; granted by Mayo County Council. A document titled 'screening report for appropriate assessment' prepared by the proposer and accepted by the planning authority, concluded that the works pose no potential for significant effects on the conservation objectives of Bellacorick Bog Complex SAC. While screening for appropriate assessment was not referred to in the planning authority's decision it can be inferred from the decision that such an assessment was made. Based on the information submitted with the application, I consider it reasonable to conclude that there will be no significant adverse impacts on the qualifying interests of any European site. Based on the foregoing I conclude that there would be no in-combination effects with Phase 1 and 2.

Met Mast

15/460 – a proposed Meteorological Mast at Sheskin for ABO Wind Ireland Limited, was granted temporary permission by Mayo County Council A document titled 'statement for screening for appropriate assessment' prepared by the ecologyireland, for the applicant, reached a finding of no significant effects. While screening for appropriate assessment was not referred to in the planning authority's decision it can be inferred from the decision that such an assessment was made. Based on the information submitted with that application I consider it reasonable to conclude that there will be no significant effects on the qualifying interests of any European site. I also consider it reasonable to conclude based on the foregoing that there would be no in-combination effects with Phase 1 and 2.

Grid West

The proposers of the subject project have supplied information in relation to the grid west project.

The Renewable Energy Strategy noted that a 400kV line will be required to harness the County's natural resources and to achieve the policies and objectives of the strategy. Underground and overhead options for the Grid West project were published in a report in July 2015. This report, which was prepared by a Government – appointed Independent Expert Panel (IEP), sets out in detail, the technical, environmental and cost aspects of three technology options:

- A fully underground direct current cable (UGC)
- A 400kV overhead line (OHL)
- A 220kV overhead line with partial use of underground cable (OHL)

The project will include a substation / convertor station in north Mayo and a substation / convertor station near Flagford, Co Roscommon. The report provides the same environmental analysis for the 220KV HVAC Overhead Line and Partial Underground Cable Option as the 400kV HVAC OHL, for this reason both are referred to in the following section of this report as OHL.

On receipt of the Grid West Report the IEP responded to the Minister for Communications, Energy and Natural Resources with a positive opinion and assessed that the report was complete and fair. Public consultation will be carried out.

The specific corridors for the underground cable (UGC) and the overhead line (OHL) options are identified in the report for the IEP. The location for the new 110kV GIS substation in the Moygownagh area (western limit of Grid West project), is approximately 6km distance from the northeast boundary of the Oweninny site.

UGC
North Mayo to Flagmount113 km. This option has potential to impact on two Natura sites: the River Moy SAC and the Tullaghanrock Bog SAC; considered below in relation to potential in-combination effects with the subject development. The potential impacts and effects of the final design on European designated sites will be considered in detail in the AA process as required under Article 6(3) of the EU Habitats Directive.

SAC's
River Moy SAC - As no part of phase 1 and 2 is within the Deel catchment the project would not contribute to in-combination effects with Grid West.

Tullaghanrock SAC - is 60km from the subject site and there is no potential for in-combination effects with Grid West.

SPA's
The underground Grid West route (UGC) does not impact on any SPA site.

The UGC route passes through one regular wintering Whooper Swan site. Sensitive sites for wintering birds along the route are identified for Whooper Swan, Greenland white-fronted Geese and Hen Harrier; at considerable distances from the subject site; with no evidence that the birds commute north-westwards towards the subject site. The proposer's consider it inconceivable that there would be cumulative impact on these populations from the project.

I accept the evidence presented and conclude that there is no potential for in-combination effects with Grid West UGC on Natura 2000 sites.

OHL's
These options have potential to impact on Natura sites; considered below in relation to potential in-combination effects with the subject development. The potential impacts and effects of the final design on European designated sites will be considered in detail in the AA process as required under Article 6(3) of the EU Habitats Directive.

SAC's
River Moy SAC - As no part of phase 1 and 2 is within the Deel catchment, the project would not contribute to in-combination effects with Grid West.

Tullaghanrock SAC - is 60km from the subject site and therefore there is no potential for in-combination effects with Grid West.

Cloonshanville Bog SAC - is 80km from the subject site and therefore there is no potential for in-combination effects with Grid West.

SPA's
The OHL does not impact on any SPA site.

The OHL routes passes through areas with breeding bird species of high conservation concern, potentially sensitive to the development. As breeding birds remain close to the nesting location through the nesting season, there is no potential that the Oweninny development could contribute to in-combination effects on breeding birds with Grid West.

The report identifies key locations from the winter birds surveys; these are at considerable distances from the subject site, with no evidence that the birds commute north-westwards towards the subject site. The analysis in the subject NIS is that is it inconceivable that there would be cumulative impact on these populations with the subject project. I accept the evidence presented and conclude that there is no potential for in-combination effects with Grid West OHL on Natura 2000 sites.

Based on the foregoind I consider that there would be no in-combination effects with Phase 1 and 2.

Conclusion in relation to Additional Projects

I am satisfied that further to the previous inspector's report, and considering the significant additional information submitted and the submissions received, in-combination effects do not arise for consideration in relation to the foregoing projects.

Appropriate Assessment of the Natura Sites where potential for impact has been identified

Bellacorick Iron Flush SAC

The significant additional information contains no additional information of note in relation to Bellacorick Iron Flush SAC. The information submitted is a composite of information previously submitted and evidence presented at the oral hearing.

Dr Karol Donnelly's report attached to the planning authority's report and the DAHG submission, refer to Bellacorick Iron Flush SAC. Dr Donnelly's recommendation that a

50m exclusion zone be established around the SAC boundary is noteworthy. The DAHG's statement that in addition to maintaining or restoring the range and population of the species at the site on a long-term basis, a sufficiently large area of habitat, with its structure and functions intact, needs to be maintained is also noteworthy. The deterioration in the species composition within the SAC noted in the NIS and referred to in the DAHG submission, is as a result of drainge and extensive commercial peat extraction in the areas surrounding the SAC which has lowered the water table. The information submitted in relation to this project indicates that the proposed development will not have any adverse impact on the SAC. Nevertheless since former development within the subject site, has impacted on the protected site, I consider that the further mitigation proposed by the planning authority, i.e. that an exclusion zone be established around the SAC, is reasonable. This buffer area should enclose the elevated ground to the east of the the flush referred to in the EIS as a source of shallow groundwater recharge to the flush, (fig 18.5).

Further to the appropriate assessment carried out in the previous inspector's report, the significant additional information submitted and the responses received, I consider that the conclusion reached in the previous report in relation to Bellacorick Iron Flush SAC, can be restated: that the proposed development, individually and in combination with other plans or projects would not adversely affect the integrity of the European site Bellacorick Iron Flush SAC (site code 0466) in view of the site's conservation objectives.

Bellacorick Bog Complex SAC

With reference to Bellacorick Bog Complex SAC, it should be noted that the significant additional information submitted includes the removal of phase 3 from the project. In the previous inspector's report it was noted that the hydrology of the site is not well documented in the application, such that the potential for adverse impact on the Bellacorick Bog Complex SAC, from the development of areas adjoining the protected site, in the north eastern part of the subject site, was of some concern. No such concern arises in relation to the revised proposal. The futher mitigation proposed in the previous inspector's report, i.e. the removal of turbine T16, does not therefore arise.

Further to the appropriate assessment carried out in the previous inspector's report, the significant additional information submitted and the responses received, I consider that the conclusion reached in the previous report in relation to Bellacorick Bog Complex SAC, can be restated: that the proposed development, individually and in combination with other plans or projects would not adversely affect the integrity of the European site Bellacorick Bog Complex SAC (site code 0922), in view of the site's conservation objectives.

Owenduff/Nephin SAC

The significant additional information submitted contains no additional information of note in relation to Owenduff/Nephin SAC.

Further to the appropriate assessment carried out in the previous inspector's report, the significant additional information submitted and the responses received, I consider that the conclusion reached in the previous report in relation Owenduff/Nephin SAC can be restated: that the proposed development, individually and in combination with other plans or projects would not adversely affect the integrity of the European site Owenduff/Nephin SAC (site code 0534), in view of the site's conservation objectives.

River Moy SAC

The significant additional information submitted includes, with reference to the River Moy SAC; the removal of phase 3 from the project, which removes from consideration the development area within the site, which drains to the Moy catchment. The significant additional information submitted also refers to the possibility that impact on the River Moy SAC could arise from work to Cloongullaun bridge, which is part of the haul routes which utilise the N26 (between Swinford and Foxford). In the absence of mitigation, construction work could impair water quality and impact on the qualifying interests of the SAC. The significant additional information further states that the areas within the Natura site, which adjoin the bridge, are developed areas; and the scale and nature of the works would not affect any of the qualifying Annex I habitats for which the site is selected.

Further to the appropriate assessment carried out in the previous inspector's report, the significant additional information submitted and the responses received, I consider that the conclusion reached in the previous report in relation to River Moy SAC can be restated: that the proposed development, individually and in combination with other plans or projects would not adversely affect the integrity of the European site River Moy SAC (site code 02298) in view of the site's conservation objectives.

Carrowmore Lake SAC

Nothing of note arises in relation to the significant additional information submitted, with reference to Carrowmore Lake SAC.

Further to the appropriate assessment carried out in the previous inspector's report, the significant additional information provided and the responses received, I consider that the conclusions reached in the previous report in relation to Carrowmore Lake SAC, can be restated: that the proposed development, individually and in combination with other

plans or projects would not adversely affect the integrity of the European site Carrowmore Lake SAC (site code 0476), in view of the site's conservation objectives.

Conclusion of Appropriate Assessment

I consider it reasonable to conclude on the basis of the information available and subject to the mitigation proposed, that the proposed development, individually and in combination with other plans or projects would not adversely affect the integrity of the European sites:

Bellacorick Iron Flush SAC (site code 0466)

Bellacorick Bog Complex SAC (site code 0922)

Owenduff/Nephin SAC (site code 0534)

River Moy SAC (site code 02298)

Carrowmore Lake SAC (site code 0476),

in view of the sites' conservation objectives.

10. Recommendation

I recommend that permission be granted for the Reasons and Considerations set out below and subject to the attached Conditions.

REASONS AND CONSIDERATIONS

Having regard to:

(a) national policy with regard to the development of sustainable energy sources,
(b) the "Wind Energy Development Guidelines" – Guidelines for Planning Authorities issued by the Department of the Environment, Heritage and Local Government in June, 2006,
(c) the character of the landscape in the area and the topography surrounding the site,
(d) the policies of the planning authority as set out in the current Mayo County Development Plan 2014 – 2020 and the Renewable Energy Strategy for County Mayo 2011-2020
(e) the distance to dwellings or other sensitive receptors from the proposed development,
(f) the Environmental Impact Statement submitted,

(g) the Appropriate Assessment Screening Report for Habitats Directive Assessment submitted,
(h) the extensive submissions made in connection with the planning application, and
(i) the evidence given at the oral hearing,
(j) the additional information submitted including the Supplemental Environmental Impact Statement, and the revised Natura Impact Statement,
(k) the further submissions and observations received,

it is considered that, subject to compliance with the conditions set out below, the proposed development would not have a significant adverse impact on the landscape or upon the archaeological or cultural heritage of the area, would not give rise to any significant impacts on the natural heritage of the area or affect the integrity of any European site or any protected species, and would be acceptable in terms of traffic safety and convenience of road users. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions PA0029

1 The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars received by An Bord Pleanála on the 19th day of October, 2015 except as may otherwise be required in order to comply with the following conditions. Where such conditions require points of detail to be agreed with the planning authority, these matters shall be the subject of written agreement and shall be implemented in accordance with the agreed particulars.

In default of agreement, the matter(s) in dispute shall be referred to An Bord Pleanála for determination.

Reason: In the interest of clarity

2 The developer shall ensure that all construction methods and environmental mitigation measures set out in the Supplemental Environmental Impact Statement, and the revised Natura Impact Statement and associated documentation are implemented in full, except as may otherwise be required by the attached conditions.

Reason: In the interest of protection of the environment

3 The powerlines between the proposed substations and Bellacorick substation shall be placed underground.

Reason: To protect avian ecology.

4 All wind turbines shall be located at least 100m from the main channel of the Oweninny/Owenmore rivers and their primary tributaries

Reason: To protect important water bodies and aquatic ecology.

5 The period during which the development hereby permitted may be carried out shall be ten years from the date of this order.

Reason: Having regard to the nature of the proposed development, the Board considered it appropriate to specify a period of validity of this permission in excess of five years.

6 This permission shall be for a period of 30 years from the date of commissioning of the wind farm.

Reason: To enable the planning authority to review its operation in the light of the circumstances then prevailing.

7 Prior to the commencement of development, an exclusion zone, enclosing at least an area extending 50m beyond the existing fenced boundary of Bellacorick Iron Flush and including the elevated ground to the east of the the flush referred to in the NIS as a source of shallow groundwater recharge to the flush, shall be suitably fenced to the satisfaction of the planning authority.

Reason: To protect the ecology of the area.

8 All imported stone shall be of local provenance, consistent with onsite geology.

Reason: To protect the ecology of the area.

9 Prior to the commencement of development the developers (and their successors in title) shall enter into legally binding agreement(s) with the planning authority under S 47 of the Planning and Development Act, 2000. The agreement(s) shall provide for the following:

(i) payment to the planning authority of all costs incurred by Mayo Co Co in relation to the repair, maintenance and rehabilitation of the road network arising form the construction of the development, determined by the Road and Bridge survey to be carried out prior to and post construction in accordance with a further condition of this permission; the amount of such costs shall be as agreed between Mayo Co Co and the developer or, in default of agreement, shall be determined by An Bord Pleanála.
(ii) Restoration of the lands to the satisfaction of the planning authority following the cessation of the operation of the windfarm, including the demolition of process items of equipment and removal of facilities to grade level.
(iii) Full implementation of the Traffic Management Plan in the EIS submitted to An Bord Pleanala and any subsequent amendments arising from reviews of that Traffic Management Plan approved by the Project Monitoring Committee.
(iv) Payment of the planning authoritys' reasonable costs in engaging transportation personnel to monitor implementation of the Traffic Management Plan and the provision of office accommodation and telecommunications facilities on site for such personnel.
(v) Payment of the authoritys' reasonable costs in engaging environmental personnel to monitor implementation of the Environmental Management System, required by way of further condition, and the provision of office accommodation and telecommunications facilities on site for such personnel.

Reason: To ensure satisfactory control of the development in the interests of the proper planning and sustainable development of the area.

10 Prior to commencement of development, a Project Monitoring Committee (PMC) shall be established to monitor:

geotechnical risks set out in the Geotechnical Risk Register,

the ecological monitoring plan, which shall include corpse searches for birds and bats,

the environmental monitoring plan, including invasive species control,

surface water runoff,

drainage control,

implementation of the restoration and landscape plan and

other environmental issues contained in the EIS/supplemental EIS submitted to An Bord Pleanala,

traffic management and road maintenance and

other matters relating to the overall management of the project.

The PMC shall comprise representatives from Mayo County Council and the Developer/applicant and may include representatives from the following: DAHG, IFI, EPA and An Taisce. The PMC shall have the right to co-opt other members as required. The Mayo County Manager or his/her nominee shall chair the PMC. Details of the mode of operation for the committee, including frequency of meetings, and reporting and liaising arrangements with other persons and bodies, shall be agreed with the planning authority initially before development commences and may be varied from time to time.

Reason: To ensure effective monitoring during construction and operation in the interests of the proper planning and sustainable development of the area.

11 Before development commences on the site, the developer shall obtain the agreement of the planning authority for a monitoring plan in relation to surface water, ground water, dust, and continuous noise. Such monitoring shall be carried out by the developer throughout the construction of the windfarm (to the date of commissioning of phase 2 of the windfarm. The monitoring plan shall, as a minimum, include:

a) A list of all monitoring locations
b) Description and specification of equipment to be used
c) The identity and qualifications of persons responsible for monitoring
d) Parameters to be used
e) Monitoring intervals.
f) Averaging times
g) Proposals for the presentation of data
h) Codes of practice to be used, and
i) Details of right of access to Mayo Co Co appointed staff to carry out environmental monitoring checks as required, or as requested by the Project Monitoring Committee.

Costs incurred by the planning authority in carrying out any necessary monitoring checks, inspections and environmental audits, shall be reimbursed by the developer.

Reason: In the interests of clarity, and the protection of the environment during the earthworks and construction phase.

12 Prior to commencement of development, the developer shall obtain the agreement of the planning authority for an Ecological Monitoring Plan to ensure that mitigation measures proposed in the Environmental Impact Statement and Supplemental Environmental Impact Statement submitted to An Bord Pleanala relating to the protection of habitats, flora and fauna are, carried out; and in addition shall include the carrying out of corpse searches for both bats and birds to increase the body of knowledge on the effect of windturbines on these species; and hydrological monitoring, to include tests for water quality, in the vicinity of Bellacorick Iron Flush for a period to at least 5 years post construction. Monitoring shall be carried out by a suitably qualified ecologist who shall liaise with the Project Monitoring Committee.

Reason: In the interests of protecting the environment.

13 The developer shall appoint a suitably qualified and experienced Environmental Officer for the period of the construction of the windfarm. As part of their duties, the Environmental Officer shall liaise with the Project Monitoring Committee in relation to implementation of the required environmental monitoring, and shall be responsible for reporting to that committee and the planning authority.

a) Any malfunction of any environmental system,
b) Any occurrence with the potential for environmental pollution,
c) Any emergency

Which would reasonably be expected to give rise to pollution of waters. The Environmental Officer shall maintain a record of any such occurrences and action taken; this record shall be available for public inspection on the planning authority's file and at the developer's offices at Bellacorrick during normal office hours.

Reason: In the interest of proper environmental control during the earthworks and construction phase.

14 A plan for the management of invasive shall be prepared and agreed with the project monitoring committee. This shall include a programme for the removal of self-

seeded Lodge Pole Pine and Rhododendron Ponticum; and measures to prevent the spread of invasive species as a result of works being carried out on this site.

Reason: To protect the ecology of the area.

15 Any in-stream works shall be carried out in consultation with Inland Fisheries Ireland. Any in-stream works should be carried out between May and October during dry weather conditions.

Where possible turbines shall be located a minimum of 100m from any watercourse.

The Forestry and Water Quality Guidelines must be strictly adhered to and felling shall not be carried out during wet weather conditions.

Where possible brash shall be removed from the site.

IFI shall be included as a notifiable body in the Emergency Response Plan in the event of a major spill or other significant discharge of polluting matter to surface waters.

Reason: To protect rivers and aquatic ecology.

16 All surface water discharges from the disturbed area of the site shall be channelled through settlement ponds. Prior to commencement of development, the developer shall agree with the planning authority precise details of a monitoring programme for the settlement ponds and their discharge, and a maintenance programme for the ponds.

Parameters to be monitored shall include:

a) Temperature
b) Turbidity
c) Dissolved oxygen
d) Electrical conductivity
e) Orthophosphate
f) Total phosphorus
g) Nitrate
h) Ammonia (as N)
i) Suspended solids

and any other parameter required by the planning authority. The frequency and methods of monitoring shall be agreed in advance of the operation of the settlement ponds with the planning authority. Any alterations to the agreed monitoring regime or maintenance programme shall be subject to agreement with the planning authority, following consultation with the Project Monitoring Committee.

Reason: In the interest of environmental protection and the proper planning and sustainable development of the area.

17 Prior to the commencement of development, the developer shall obtain the agreement of the planning authority for an Environmental Management System (EMS), specific to the construction of the windfarm. The EMS shall include as a minimum the following:

a) Management and reporting structure
b) Schedule of environmental objectives and targets, including objectives for the minimization of all silt and settlement pond flow discharges during periods of high precipitation.
c) An environmental management programme
d) Corrective action procedures
e) Awareness and training programme
f) Communications programme

The developer shall implement the agreed EMS for the duration of the earthworks and construction phase of the development. On written request by the planning authority, the developer shall submit a report on any specific environmental matter and/or an environmental audit as specified by the planning authority.

Reason: In the interest of environmental protection and the proper planning and sustainable development of the area.

18 The EMS shall be the subject of an annual review by the planning authority, following consultation with the Project Monitoring Committee. The developer shall modify the EMS in accordance with any reasonable requirement of the planning authority, at any stage.

Reason: In the interest of environmental protection and the proper planning and sustainable development of the area.

19 The developer shall adhere to the Wildlife Acts 1976 to 2000 in relation to protected wild animals and shall liaise with the local wildlife ranger or the Department of Arts, Heritage and the Gaeltacht (DAHG) in this regard.

Reason: To ensure the protection and conservation of protected wild animals.

20 All agreements with the planning authority, required by way of the conditions in this permission, shall be in writing and copies of such agreements shall be made available for public inspection during normal office hours at the planning authority's offices, and at the developer's offices in Bellacorrick. Monitoring results required under the conditions of this permission shall be submitted, at agreed intervals, to the planning authority electronically and in hard copy form, and shall be made available for public inspection on the planning authority's file, and at the developer's offices in Bellacorrick. The developer shall develop a computerised database for the recording and transfer of monitoring data; the design of the database shall be subject to agreement with the planning authority.

Reason: In the interest of clarity and transparency, and to facilitate ease of interpretation of all monitoring data collected and recorded.

21 All tank and drum storage areas on the sites shall, as a minimum, be bunded to a volume not less than the greater of the following:

110% of the capacity of the largest tank or drum within the bunded area, or

25% of the total volume of substance which could be stored within the bunded area.

Reason: To prevent water pollution.

22 All fuel storage areas and cleaning areas, particularly for trucks, shall be rendered impervious to the stored or cleaned materials and shall be constructed to ensure no discharges from the areas.

Reason: To prevent water pollution.

23 The developer shall maintain on the sites for the duration of the construction period, oil abatement kits comprising of booms and absorbent materials. The precise nature and extent of the kits and the locations at which they are to be kept shall be agreed in writing with the planning authority prior to commencement of development.

Reason: To prevent water pollution.

24 During construction and haulage, noise levels shall be kept to a minimum. Any activity that will result in a significant increase in the ambient noise levels, for example, piling or rock breaking, shall be notified to the Project Monitoring Committee (PMC) in advance. Advance notice of the schedule of such activity shall be made available to the general public by way of public advertisement, if required by the PMC.

Reason: In the interests of public health and residential amenity.

25 Noise mitigation measures outlined in the environmental impact statement received by the Board on the 4th day of July, 2013, shall be carried out in full. The following conditions shall be complied with:

a) Noise levels emanating from the proposed development following commissioning, by itself or in combination with other existing or permitted wind energy development in the vicinity, when measured externally at third party noise-sensitive locations, shall not exceed 43dB(A)L90, 10 min; or a fixed lower limit of 37.5dB(A) at lower wind speeds in those low noise environments identified as Noise Sensitive Locations H36-H46 inclusive in Table 7-15 of the environmental impact statement.
b) All noise measurements shall be made in accordance with I.S.O. Recommendations R1996/1, 2 & 3 “Acoustics – Description and Measurement of Environmental Noise”.
c) The developer shall arrange for a noise compliance monitoring programme for the operational wind farm. Details on the nature and extent of the monitoring programme, including any mitigation measures such as the de-rating of particular turbines, shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development.

Reason: In the interest of residential amenity.

26 Shadow flicker shall be managed to protect the amenities and health of residents of the area:

a) Where necessary turbines shall be fitted with appropriate equipment and software to suitably control shadow flicker at nearby dwellings, in accordance with details which shall be submitted to, and agreed in writing with, the planning authority prior to the commencement of development.
b) Shadow flicker arising from the proposed development, by itself or in combination with other existing or permitted wind energy development in the vicinity, shall not exceed 30 hours per year or 30 minutes per day at existing or permitted dwellings or other sensitive receptors.
c) Shadow flicker from the motion of overlapping blades shall not occur, at any time, at any existing house within ten rotor diameters of a turbine,as a result of the proposed development and appropriate equipment and software shall be fitted to the relevant turbines, to ensure compliance with this requirement.
d) A report shall be prepared by a suitably qualified person in accordance with the requirements of the planning authority, indicating compliance with the above shadow flicker requirements. Within 12 months of commissioning of the proposed wind farm, this report shall be submitted to, and agreed in writing with, the planning authority.
e) A shadow flicker compliance monitoring programme for the proposed development shall be submitted to, and agreed in writing with, the planning authority prior to the commencement of development.

Reason: In the interest of residential amenity.

27 A Complaints Register shall be maintained by the developers at their offices in Bellacorrick, this shall relate to all written complaints made regarding any aspect of the earthworks and construction phase of the development. The register, which shall be available for public inspection on request during normal office hours, shall include the following:

a) The name of the complainant
b) The nature of the complaint
c) The date and time of the complaint
d) Actions taken as a result of the complaint

Reason: In the interests of proper monitoring of the development

28 No waste material, other than material being transferred to a licenced waste facility, generated on the site during the construction phase shall be removed off the site without the prior agreement of the planning authority.

Reason: To provide for the appropriate management of waste and in the interests of protecting the environment.

29 Prior to the commencement of development, the developer shall submit, and obtain the agreement of the planning authority to a plan containing details for the management of waste (and, in particular, recyclable materials) within the development including the provision of facilities for the storage, separation and collection of waste and, in particular, recyclable materials, and for the ongoing operation of these facilities.

Reason: To provide for the appropriate management of waste and in particular, recyclable materials in the interests of protecting the environment.

30 Prior to site works commencing, detailed site investigations shall be undertaken, a geotechnical risk register shall be developed for the site inclusive of a Zonal Peat Stability Risk Assessment, and a method statement shall be developed including construction mitigation measures, with input from geotechnical, hydrology and other experts, for each turbine/hardstand, length of access track and other infrastructure which has been identified as having substantial risk; and details of these investigations and methodologies and any necessary micrositing arising shall be submitted for the written agreement of the planning authority.

Reason: In the interests of proper planning and sustainable development of the area.

31 All site development works shall be carried out to a standard not below the minimum specified in Best Practice for Wind Energy Development in Peatlands, issued by the Department of the Environment, Community and Local Government.

Reason: In the interests of proper planning and sustainable development of the area.

32 Details of the turbine design, and colour shall be submitted to, and agreed in writing with, the planning authority, prior to commencement of development.

a) Cables from the turbine to the substation shall be run underground within the site.
b) The wind turbines shall be geared to ensure that the blades rotate in the same direction.

c) With the exception of the road serving the proposed visitors centre, the access tracks within the site shall be surfaced in gravel or hardcore and shall not be hard topped with tarmacadam or concrete.

Reason: In the interests of the amenities of the area.

33 Prior to the commencement of development the developer shall agree a protocol for assessing any impact on radio or television or other telecommunications reception in the area. In the event of interference occurring, the developer shall remedy such interference according to a methodology to be agreed with the planning authority, following consultation with other relevant authorities and prior to commissioning the turbines.

Reason: In the interests of residential amenity.

34 Details of aeronautical requirements shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. Subsequently the developer shall inform the planning authority and the Irish Aviation Authority of the co-ordinates of the as-constructed positions of the turbines and the highest point of the turbines (to the top of the blade spin).

Reason: In the interest of air traffic safety.

35 A project archaeologist shall be appointed for the duration of the archaeological works associated with the development. The Project Archaeologist shall ensure that the archaeological works are carried out in accordance with provisions of the policy and advice notes on archaeological excavations issued by the Department of Arts, Heritage and the Gaeltacht.

A detailed archaeological walkover assessment of all areas of development activity shall be completed by a suitably qualified archaeologist prior to the commencement of construction works.

The scope of the archaeological walkover assessment shall be agreed by the Project Archaeologist with the Department of Arts, Heritage and the Gaeltacht and shall include all areas where development activity will take place such as geotechnical investigations, permanent and temporary construction areas, spoil storage areas, temporary

compounds, borrow pits, crane stands and river crossings. This work area shall be carried out under licence to the Department of Arts, Heritage and the Gaeltacht with provision for pre-development archaeological testing/sampling to establish the extent and nature of any potential archaeological material where such is identified.

Having completed the archaeological walkover assessment, the archaeologist shall submit a written report to the Planning Authority and to the Department of Arts, Heritage and the Gaeltacht. The report shall comment on the degree to which the extent, location and levels of all development activities will affect the archaeological remains. This should be illustrated with appropriate plans, sections, etc.

Where archaeological material is shown to be present, further mitigatory measures will be required; these may include redesign to allow for preservation in-situ, excavation and /or monitoring.

Preservation in-situ, must allow for the maintenance of current hydrological conditions (water levels, stable ph and oxidation levels) to be achieved at the particular site, where organic materials survive. The provision of dipwells to record the water, ph and oxidation levels to ensure preservation in-situ should be facilitated.

Where it is not feasible to fully avoid material of archaeological significance, arrangements must be made in advance of the commencement of development works ~~for the preservation by record or archaeological excavation of this material in line with~~ the Policy and Guidelines on Archaeological Excavation' 1999 (D.A.H.G. I) allowing sufficient time and resources for this to be achieved prior to the commencement of construction works.

The developer shall be prepared to be advised by the Department of Arts, Heritage and the Gaeltacht with regard to any necessary mitigation actions.

No site preparation or construction work shall be carried out until after the archaeologist's report has been submitted and permission to proceed has been received in writing from Department of Arts, Heritage and the Gaeltacht.

Reason: In order to conserve the archaeological heritage of the site and to secure the preservation of any remains which may exist within the site.

36 Prior to the commencement of construction works, a temporary buffer area of 50m shall be established and fenced around Ch-4 and Ch-3. No development works of any kind shall take place within the buffer areas.

Reason: In order to conserve the archaeological heritage of the site and to secure the preservation of any remains which may exist within the site.

37 All construction traffic shall access the site via the 3 No. existing site access points located on the N59 (Crossmolina – Bangor) National Road. No access to the site for construction purposes is permitted from any of the local roads adjoining the site.

Reason: In the interest of traffic safety.

38 Prior to the commencement of the development:

a) Full details of the upgrading works to the existing site access arrangements and the associated road improvement works to be undertaken along the public road, including any road widening, the provision of deceleration lanes, signage and road markings designed to facilitate the proposed development shall be submitted to and agreed in writing with the planning authority.
b) The developer shall have completed, to the written satisfaction of the planning authority, the upgrading works to the existing site access arrangements and the associated road improvement works along the public road in accordance with point (a) above.

The provision of the required upgrading of the existing site access arrangements and the associated road improvement works on the public road shall be undertaken at the expense of the developer.

Reason: In the interest of proper planning and sustainable development and in the interest of pedestrian and road traffic safety.

39 Details of the proposed closure of an existing site entrance and its subsequent use for emergency access purposes only, shall be submitted to, and agreed in writing with, the planning authority prior to the commencement of development.

Reason: In the interest of traffic safety.

40 All necessary permits, required for the transport of abnormal loads on public roads, shall be in place prior to commencement of development.

Reason: To protect the public road network and to clarify the extent of the permission in the interest of traffic safety and orderly development.

41 Prior to commencement of development, details of the following shall be submitted to, and agreed in writing with the planning authority:

i) a Transport Management Plan, including details of the road network/haulage routes, the vehicle types to be used to transport materials on and off site, and a schedule of control measures for exceptional wide and heavy delivery loads.
ii) a condition survey of the roads and bridges along the haul routes to be carried out at the developer's expense by a qualified engineer both before and after construction of the wind farm development. This survey shall include a schedule of required works to enable the haul routes to cater for construction-related traffic. The extent and scope of the survey and the schedule of works shall be agreed with the planning authority/authorities prior to commencement of development.
iii) detailed arrangements whereby the rectification of any construction damage which arises shall be completed to the satisfaction of the planning authority/authorities.
iv) detailed arrangements for temporary traffic arrangements/controls on roads.
v) a programme indicating the timescale within which it is intended to use each public route to facilitate construction of the development.

All works arising from the aforementioned arrangements shall be completed at the developer's expense, within 12 months of the cessation of each road's use as a haul route for the proposed development.

In default of agreement on any of these requirements, the matter shall be referred to An Bord Pleanála for determination.

Reason: To protect the public road network and to clarify the extent of the permission in the interest of traffic safety and orderly development.

42 An independent road safety audit, Stage 3 in accordance with current NRA HD 19-12 Road Safety Audits incorporating HA 42 (June 2012), shall be undertaken by the

developer. All mitigation measures identified in this audit shall be undertaken in full by the developer prior to any works commencing on site.

Reason: In the interests of traffic safety.

43 All vegetation within the sight visibility line at all the entrances shall be cut back and maintained by the developer.

Reason: In the interests of traffic safety

44 A wheel wash facility shall be installed at all three site entrances to prevent the transportation of mud/dust onto the public road network.

Reason: In the interests of traffic safety.

45 On full or partial decommissioning of the wind farm or if the wind farm ceases operation for a period of more than one year, the masts and the turbines concerned (including foundations) shall be removed and all decommissioned structures [and any access roads] shall be removed within three months of decommissioning.

Reason: To ensure satisfactory reinstatement of the site upon cessation of the project.

46 Prior to commencement of development a community liaison committee shall be established to liaise between the applicants and the local community. The membership of this committee shall reflect membership of the local community of Bellacorick and neighbouring areas. Membership shall be restricted to eight persons under an independent chairperson and include one member and one official from the planning authority and two representatives of the applicant company. The community liaison committee shall have responsibility for the administration of the community gain fund account to be set up in accordance with condition number 46 and for decisions on projects to be supported by the fund in addition to acting as a liaison committee with the local community in relation to ongoing monitoring of the operation of the proposed development.

Reason: To provide for appropriate ongoing review of operations at the site in conjunction with the local community and to provide for the allocation of resources from the community gain fund in accordance with the requirements of the local community.

47 The developer shall pay into a community gain fund a contribution of € 2,500 per installed Mw per annum towards the cost of the provision or financing of a facility (or facilities) or service(s) which would constitute a substantial gain to the local community.

Reason: It is considered reasonable that the developer should contribute towards the costs of facilities or services of benefit to the community, which will help to mitigate the impact of the development on the local community.

48 The developer shall pay to the planning authority a financial contribution as a special contribution under section 48(2)(c) of the Planning and Development Act, 2000 in respect of the repair and maintenance of public roads damaged by construction and maintenance traffic. The amount of the contribution shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to the Board for determination. The contribution shall be paid prior to the commencement of the development or in such phased payments as the planning authority may facilitate and shall be updated at the time of payment in accordance with changes in the Wholesale Price Index – Building and Construction (Capital Goods), published by the Central Statistics Office.

Reason: It is considered reasonable that the developer should contribute towards the specific exceptional costs which are incurred by the planning authority which are not covered in the Development Contribution Scheme and which will benefit the proposed development.

49 Prior to commencement of development, the developer shall lodge with the planning authority a cash deposit, a bond of an insurance company, or such other security as may be acceptable to the planning authority, to secure the reinstatement of public roads which may be damaged by the transport of materials to the site, coupled with an agreement empowering the planning authority to apply such security or part thereof to the satisfactory reinstatement of the public road. The form and amount of the security shall be as agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

Reason: In the interest of traffic safety and the proper planning and sustainable development of the area.

50 Prior to the commencement of development, the developer shall lodge with Mayo Co Co a cash deposit, a bond of an insurance company, or other security to secure the satisfactory reinstatement of the site, upon cessation of use of the windfarm coupled with an agreement empowering Mayo Co Co to apply such security or part thereof to the satisfactory reinstatement of the site. The form and amount of the security shall be as agreed between Mayo Co Co and the developer or, in default of such agreement, shall be determined by An Bord Pleanála.

Reason: To ensure the satisfactory reinstatement of the site.

51 The developer shall pay to the planning authority a financial contribution in respect of public infrastructure and facilities benefiting development in the area of the planning authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000. The contribution shall be paid prior to the commencement of development or in such phased payments as the planning authority may facilitate and shall be subject to any applicable indexation provisions of the Scheme at the time of payment. Details of the application of the terms of the Scheme shall be agreed between the planning authority and the developer or, in default of such agreement, the matter shall be referred to the Board to determine the proper application of the terms of the Scheme.

Reason: It is a requirement of the Planning and Development Act 2000 that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to the permission.

_____ _____

Dolores McCague Date

Inspector