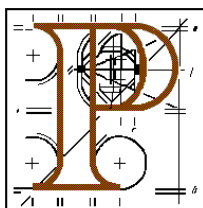


An Bord Pleanála



Addendum Inspector's Report

Development: Two wind turbines, new internal access roads, upgrading of existing internal roads, underground cables and associated works at Knockduff and Inchvora, Milestone, Co. Tipperary.

Section 132 Submission: Addendum to the Environmental Impact Statement for the proposed Inchivara Wind Farm, Co. Tipperary

Date of Site Inspection: 5th April 2016

Inspector: Kenneth Moloney

1.0 INTRODUCTION

The proposed development consists of the erection of two wind turbines and the construction of an internal access road. The proposal also includes upgrading of existing internal access road, underground cables and associated works.

Having regard to the High Court judgement in the case *Pol O Grianna V An Bord Pleanala* the Board sought a revised EIS from the applicant as the Board was unable to complete an EIA. The Board issued a Section 132 Notice requesting the applicant to submit further details in relation to;

- general route corridor for the proposed grid connection
- pole / tower type and height, if relevant
- Line voltage
- Overground / underground connection or combination of both

A consideration of the cumulative effects was also required to take place within the EIS. The applicant, in response, submitted an Addendum to the EIS for the proposed Wind Farm.

2.0 SITE DESCRIPTION

The route corridor for the proposed grid connection is strongly rural in character. A defining feature of the route corridor is that it follows public road for approximately 18 km and travels through countryside for about 4.3 km.

The public road travels adjacent to the River Multeen for a large proportion of the route corridor. I have attached a compiled O.S. Discovery Series map (scale 1:50,000) which outlines the route in black marker.

3.0 PROPOSED GRID CONNECTION

It is proposed that the cables will be installed in ducts with joint bays installed at suitable locations. It is anticipated that a typical trench will have a dimension of 60cm width and 120cm depth. The cable ducting will either be directly installed directly into the road or on the road verge.

There are 17 no. river crossings and it is outlined that there are three options available and these include;

- a. bridge crossings
- b. directional drilling
- c. stream crossing

The cable route construction methodology is contained in Appendix C of the submitted Addendum to the EIS.

4.0 ROUTE CORRIDOR

In relation to the grid connection the proposed route will take the following course. It is proposed that a 20Kv cable will run underground for approximately 2km from the proposed wind farm to the substation at the permitted 38kv substation at Milestown. From the Milestown substation it is proposed that an underground cable will travel for approximately 22.3km to the existing 38kv/110kv Cauteen substation at Seskin, Co. Tipperary.

Appendix B of the addendum EIS outlines the route of the proposed grid connection. I note that the initial 2km would be buried alongside the internal site access track and will cross the R497. On the proposed route from the Milestone substation to the Cauteen substation the connection to the national grid will be installed on both private agricultural lands (4.3km) and along public roadway (18km).

5.0 ASSESSMENT

The main issues to be considered in this addendum report are: -

- Environmental Impact / Environmental Assessment
- Stage 1 Appropriate Assessment Screening
- Stage 2 Appropriate Assessment

Environmental Impact / Environmental Assessment

Human Beings, fauna and flora

Firstly I will consider the impacts on human beings having regard to the proposed grid connection. I have described the proposed grid connection route above and I would note that the route will be on public road for about 18km. I would consider that the construction phase of this development will have implications for human beings in terms of traffic disruption and noise generation. In terms of traffic I note from the Addendum to the EIS it is intended that the installation of the cables will be at a rate of 100m per day. This will relate to a small proportion of the public road and in my view will have an insignificant impact on humans in terms of traffic inconvenience. I also noted from my two site inspections that the public roads, the subject of the grid connection, has limited traffic and is not a main route across the county. There will be no operational impact on human beings in relation to traffic. In relation to noise I would note, based on Chapter 10 of the submitted addendum, that houses situated in close proximity will experience noise impacts given the information in Table 10.1 of Chapter 10 which illustrates typical construction site noise emission levels. The noise impacts will reduce with distance from the source and the noise implications from the construction of the grid connection are temporary in nature. I also noted from a visual observation during my site inspection that there is only a limited number of houses that will be impacted during the construction phase. Firstly there are very few houses along the route, possibly owing to the topography of the area, and

secondly some of the houses on the route are well set back from the public road. There will be no noise implications during the operational phase of the grid connection.

In relation to fauna the proposed grid connection will involve underground cabling and therefore is unlikely to have any adverse impacts on local fauna. In relation to flora the installation of the cables is predominately taking place on roads, either local access tracks or public roads, and therefore this component is unlikely to have any significant impacts. However there is a portion of the grid connection route that will run through agricultural land for approximately 4.3 km. In the short this will result in habitat removal however in the medium term to long term with the re-establishment of the vegetation I would anticipate that there will be no significant impacts.

Soil, water, air, climate and the landscape

In relation to **soil** a direct impact of the proposed development would be the removal of soil as part of the site clearance and for the installation of cables. The depth of the proposed trenches is approximately 120cm deep and the soil removed will mainly be used for infill after laying of cables however excess soil will also be used for the foundations of the wind turbines and also sent to an approved waste disposal site. Overall I would not consider any residual impacts on soil due to the proposed grid connection.

In relation to **hydrology** the impacts from the construction of the grid connection may include water quality impacts at river/stream crossings along route sections that are close to watercourses. I would acknowledge that impacts could potentially occur at stream crossing locations where open trench work is proposed. I noted from my site inspection that the public road (R497) in some parts is situated very close to the River Multeen. I also noted that the gradient of the route north of the metal bridge, rises steeply and therefore any surface water run-off along the public road is likely to flow downwards towards the river. There is potential for contamination to the river during the construction stage. I would note that no impacts are anticipated at operational phase. The Addendum EIS outlines mitigation measures in Section 8.5 and I would generally concur with the Addendum of the EIS that should the mitigation measures be implemented the residual impacts will be minimal. A cumulative impact assessment is conducted in Section 8.7 of the Addendum to the EIS and I would consider the conclusions of this assessment are robust.

In relation to **air and climate** and having regard to the available information I would not consider that the proposed grid connection would result in any additional implications for air and climate. Overall the proposed development, and in combination with other local wind farm developments, is likely to result in a reduction in greenhouse gases and will therefore have a positive outcome for air and climate.

In relation to the **landscape** the proposed grid connection is underground and there will be no impacts on the landscape by the grid connection alone. The overall cumulative impacts of the Inchivara wind farm and other wind farms in the general area will have a visual and landscape impact locally. However having regard to the landscape designation outlined in my primary report the appeal site and its environs is located within a designated Secondary Amenity Area in accordance with the provisions of the County Development Plan and based on this designation I would conclude that the cumulative impacts of the proposed wind farms are capable of being absorbed without adversely impacting on the landscape or visual amenities of the area.

Material assets and cultural heritage

In relation to material assets the proposed development will result in **traffic** generation in both construction and operational stage. In relation to traffic the submitted report anticipates that the expected traffic generation for the construction of the grid connection will be 2 – 3 HGV's per day in addition to employee vehicle movements. This traffic generation is generally small scale and with appropriate traffic management in place it will not result in significant traffic congestion. In relation to the cumulative impact with other permitted or proposed wind farms in the local area I would consider that the grid connection is more remote than the actual wind turbines and as such the cumulative impact will be negligible.

In relation to cultural heritage I would note that the submitted addendum report provides a comprehensive assessment of **archaeological and architectural features** adjacent to the proposed grid connection route. The closest national monument to the proposed grid connection route is TN039-027. This national monument, although not visible above surface, is located some 65m from the proposed grid connection route. I note that the Addendum to the EIS includes mitigation measures outlined in Section 14.5.1.1. These mitigation measures include providing 50m and 30m buffers around selected national monuments and I would consider these measures adequate having regard to the nature of the proposed development. The report also identified newly recorded monuments including the Ogham Stone which is situated approximately 118 metres from the cable route. However I would consider that this 4th to 8th century AD stone is sufficient distance from the proposed cable route to prevent any unnecessary impacts.

The report also refers to architectural features including the milestone / milepost structure from which the local area takes its name. However this structure is situated approximately 700m from the cable route and in my view the impact on this structure is negligible. There are eight bridges which are protected structures on the public road along the proposed route of the cable connection. The Construction Methodology Statement proposes the cable trenching on the road across the bridges and therefore no negative impacts on the bridges will take place.

In relation to cumulative impacts I would consider that having regard to the established and permitted wind farms that the overall impact of the proposed grid connection route would not be significant. The operational impact on the national grid connection on cultural heritage will be minimal due to the underground nature of the cable. The overall scale of the impact would be slight to minor and therefore I would not anticipate a cumulative impact with existing or permitted development having an adverse impact locally.

The interaction between the factors mentioned in the first, second and third indents

In my opinion the following interactions are relevant;

Human beings / noise and traffic – the proposed development will generate additional traffic primarily during construction stage.

Human beings / air quality – the proposal will have air implications during construction period,

Soil / water – the removal of soil for site excavation purposes may result in increased run-off with implications for receiving waters.

Stage 1 Appropriate Assessment Screening

I have considered an AA Screening and AA Stage 2 for the proposed wind farm in my primary report therefore the Appropriate Assessment Screening in this report will assess the impact of the grid connection route on relevant Natura 2000 sites and any cumulative impacts.

The purpose of the Appropriate Assessment Screening is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone or in combination with other plans or projects, could have significant effects on a Natura 2000 site in view of the site's conservation objectives. The 'Appropriate Assessment of Plans and Projects in Ireland Guidelines, 2009,' recommend that if the effects of the screening process are 'significant, potentially significant, or uncertain' then an appropriate assessment must be undertaken.

The following is a list of protected sites within 10km radius of the proposed grid connection corridor;

Site	Code	Distance	Conservation Interest
Slievefelim to Silvermines Mountains SPA	004165	Adjoins boundary of SPA	- Hen Harriers
Anglesey Road SAC	002125	300 metres	- Species-rich <i>Nardus</i> grasslands
Lower River Shannon SAC	002165	4.5km W	- Freshwater Pearl Mussel

			<ul style="list-style-type: none"> - Sea Lamprey - Brook Lamprey - River Lamprey - Atlantic Salmon - Sandbanks which are slightly covered by sea water all the time - Estuaries - Mudflats and sandflats not covered by seawater at low tide - Coastal lagoons - Large shallow inlets and bays - Reefs - Perennial vegetation of stony banks - Vegetated sea cliffs of the Atlantic and Baltic coasts - <i>Salicornia</i> and other annuals colonizing mud and sand - Atlantic salt meadows - Bottlenose Dolphin - Otter - Mediterranean salt meadows - Water courses of plain to montane levels - <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils - Alluvial forests
Lower River Suir SAC	002137	Within SAC	<ul style="list-style-type: none"> - Atlantic salt meadows - Mediterranean salt meadows - Water courses of plain to montane levels with the <i>Ranunculus fluitans</i> and <i>Callitriche-Batrachion</i>

			<ul style="list-style-type: none"> vegetation - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles - Alluvial forests - <i>Taxus baccata</i> woods - White-clayed crayfish - Sea Lamprey - Brook Lamprey - River Lamprey - Twaite Shad - Salmon - Otter
Philipston Marsh SAC	001847	500m W	- Transition mires and quaking bogs

In order to establish the impact of the proposed grid connection route on the above mentioned Natura 2000 sites it is necessary to examine the source-pathway-receptor model.

Source

I would have regard to the characteristics of the proposed development during construction and during the operational stage. I have outlined the nature of the construction to facilitate the proposed gable connection to the national grid in Section 3.0 above of this report. In summary the extent of the route corridor is 24.3km in length and this route covers the proposed internal track within the Inchivara Wind Farm (2km) and along the side of the public road (16km) from Milestone substation to the town land of Glassdrum, just east of Cappawhite, mainly along the R497 and other public roads. The cable route passes through the Lower River Suir SAC (002137), however will remain under hard surface road throughout. For the final stretch (6.3km) the route travels along open country and third party lands and minor public roads, south and south-east of Cappawhite, which are largely fields of improved agriculture.

It is proposed that the cables will be installed in ducts with joint bays installed at suitable locations. It is anticipated that a typical trench will have a dimension of 60cm width and 120cm depth. The cable ducting will either be directly installed into the road or on the road verge.

There are 17 no. river crossings and it is outlined that there are three options and these include bridge crossings, directional drilling and stream crossings. The cable route construction methodology is contained in Appendix C of the Addendum of the EIS.

As the gable connection is underground it is anticipated that there will be no operational impacts and I would consider this a reasonable conclusion.

The potential impacts, in my view, are therefore in the construction phase. The construction methodology statement (Appendix C of the Addendum to the EIS) outlines the intended construction works. In general the construction of the proposed cable connection will include excavations which although local in nature depending on their proximity to the designated sites may have impacts on water quality.

I have outlined the proposed construction works in Section 3.0 above and potential unmitigated impacts include water quality impacts along route sections that run close to the watercourses. The impacts, should they occur, are generally temporary in nature. The submitted Addendum Appropriate Assessment Screening argues that with the use of best practice techniques that no adverse implications are anticipated. However it is my view that the scale of the mitigation measures proposed are not readily an integral part of the construction works associated with the installation of a cable.

Pathway

The second issue is whether there is an ecological connectivity between the development site and any SAC. I have included a print-out of a map from the NPWS website (www.npws.ie) which includes European designated sites in the local area and I have indicated the proposed grid connection route in black marker on this map. In a north to south direction I would note that the proposed grid connection route adjoins the boundary of the Slievefelim to Silvermines Mountains SPA and there is therefore a connection.

Further south along the R497 lies the Anglesey Road SAC, however the grid connection route avoids this SAC as it tracks an alternative local road before joining the regional road further south of the SAC. As such in the absence of any pathway I would conclude that the proposed development would not be likely to have significant effects on the Anglesey Road SAC (Site Code 002125) in view of the sites conservation objectives.

The proposed grid connection route then travels along the R497 in a southwards direction adjacent to the River Multeen and thus traverses the Lower River Suir SAC (Site Code 002137). The proposed works includes 11 no. river crossings within the River Suir Catchment and four of these river crossings are over the SAC (River Multeen). Therefore given

the proximity of the River Multeen to the public road there is a direct pathway from the construction works to the SAC.

I would note that the proposed grid connection route travels east of the Lower River Shannon (Site Code 002165) and the Philipston Marsh SAC (001847). There is no pathway between these designated sites and the proposed grid route. I would conclude that the proposed development would not be likely to have significant effects on the Lower River Shannon (Site Code 002165) and the Philipston Marsh SAC (001847) in view of the sites conservation objectives.

Receptor

The qualifying interest for the Slievefelim to Silvermines Mountains SPA is hen harriers and given that the proposed cable connection is underground then the proposal is unlikely to have any significant effects on the conservation objectives of this SPA. The construction works are temporary in nature and any flora disturbed during works would be replaced. Therefore I would consider that the proposed grid connection corridor would not present any additional impacts on the SPA than that already reported in my primary report.

In the relation to the Lower River Suir SAC (Side Code 002137) I would note that the Site Synopsis, available on the NPWS website, refers to floating river vegetation as evident along many of the tributaries of the River Suir and that these species are protected under the Flora (Protection) Order, 1999. In relation to the Multeen River the Site Synopsis states that it is a fast flowing river and the following is stated '*Water-crowfoots occur in abundance and the aquatic moss (fontinalis antipyretica) is also common. In sheltered shallows, species such as water-cress (Nasturium officinale) and water starworts (callitriche spp.) occur. The river channel is fringed for most of its length with Alder, Willow, and a narrow strip of marshy vegetation*'.

I would note that Section 2.4.3 of Appendix E of the Addendum Report concludes that having regard to the fact that there are no in-stream works involved and the use of best practice techniques that the project would not have significant impacts on the qualifying interests within the SAC.

I would consider on the basis of the works proposed and the proximity of these works to the Multeen River, which in some cases is less than 1 metre, that the proposal has the potential to impact on water quality. In conclusion therefore I would consider that it is likely that the proposed development will have significant effects on the SAC in view of the sites conservation objectives.

Stage 2 Appropriate Assessment

The proposed construction works to facilitate the grid connection route are temporary in nature. In general the works proposed include laying an

underground cable within the public road or on the grass verge adjoining the public road. The proposed works will also involve the river / stream crossings.

These proposed works given the drilling and excavations will give rise to a construction works in very close proximity to the River Multeen and any surface water run-off from the construction works is likely to impact on the water quality of the River Multeen.

I would note in Appendix C 'Grid Connection Cable Route Construction Methodology' of the Addendum to the EIS and Section 8.5 of the Addendum to the EIS that there is an extensive range of mitigation measures and it is my view that based on the full implementation of these measures that the water quality of the Multeen River would be protected.

I would consider that having regard to the documentation on the file and the nature and scale of the proposed development works, and mitigation measures, which includes a constraints zone and general protection measures, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European site no. 002137 in view of the site's conservation objectives.

6.0 CONCLUSION

I would consider based on my conclusions above that the proposed grid connection route would individually or in combination with other plans or projects would not adversely affect the integrity of the European site no. 002137, in view of the site's conservation objectives.

Kenneth Moloney
Planning Inspector
8th April 2016