



An
Bord
Pleanála

Inspector's Report ABP 314517-22

Development	Erection of 1 No. wind turbine (hub height 65m, blade length 23.5m) and the construction of an electrical substation, site access road and ancillary works
Location	Kildreenagh, Bagenalstown. Co Carlow.
Planning Authority	Carlow Co. Council.
Planning Authority Reg. Ref.	21254
Applicant(s)	Joe Hughes
Type of Application	Permission
Planning Authority Decision	Grant with Conditions
Type of Appeal	Third Party
Appellant(s)	Emma Bolger & Thomas Millar. Cyril Murphy.
Observers	Josie Nolan
Date of Inspection	November 22 nd , 2022
Inspector	Breda Gannon.

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1.0 Site Location and Description

The site is located in the townland of Kildreenagh, Co. Carlow. It forms part of an expansive agricultural field on a working farm with farm building located close to the local road to the south. The ground slopes gently northwards to a more elevated ridge. Access to the site is via an existing agricultural track that extends along the western side of the field.

Land use in the area is primarily agricultural with areas of forestry in upland areas. The pattern of residential development is dispersed with isolated houses scattered along the road network. The nearest settlements are Newtown and Fenagh to the east, Nurney to the north and the larger towns of Bagenalstown and Leighlinbridge to the west.

2.0 Proposed Development

The proposal is to erect a wind turbine on the site. The turbine would have a hub height of 65m, blade length of 23.5m and an overall tip height of 88.5m. A substation (25m²) will be provided to the west side of the proposed turbine. It would be rendered externally and provided with a natural slate roof.

The turbine will be connected to the substation via an underground cable. An overhead connection (c 480m) will be provided from the proposed substation to connect into the national grid, which remains to be agreed with EirGrid/ESB.

3.0 Further Information

Further information on the application was requested by the planning authority on August 24th, 2021 on the following matters:

- Intended use of the proposed turbine (private use or connection to the national grid), power output.
- Plans showing positioning and route of underground cable.
- Clarity on the wind resource in the area.
- Landscape & Visual Impact Assessment.

- Revised plans showing scaled dimensions of the turbine and accurate distances to residential properties.
- Shadow Flicker Assessment.
- Noise Impact Assessment.
- CEMP.
- Clarity on depth of foundation for the proposed turbine.
- Operational life of proposed turbine and proposals for future decommissioning.
- Security for proposed substation.

The applicant's response was submitted on June 1st, 2022 and was to the satisfaction of the Planning authority.

Objections to the development were received by the planning authority and the main issues raised relate to the following:

- Noise.
- Visual impact in exposed, vulnerable and scenic landscape.
- Impacts on human health.
- Biodiversity impacts.
- Contamination of groundwater.
- Negative impacts on tourism and amenity.
- Alternatives such as solar farms should be considered.
- Lack of consultation with local community.
- Impacts on archaeology.
- Electromagnetic interference.
- No information on turbine manufacturer, technology, grid connection.
- Construction plan and decommissioning.

4.0 Planning Authority Reports

Planning Reports

The **Planning Officer's** report following the receipt of further information noted that the new Carlow County Development Plan 2022-2028 was adopted and came into force on July 4th, 2022. The planning report takes account of the relevant policies, objectives and related provisions of the new plan.

The planning officer's report states that EIA is not required for the subject proposal and that the proposed development would not result in significant effects on a European site, to warrant AA.

The intended use of the turbine is noted and considered to be in accordance with national, regional and local policy commitments to encourage renewable energy and reduce dependency on fossil fuels in the production of electricity. It is considered that the feasibility of a grid connection has been satisfactorily demonstrated and that the potential connection point is within the applicant's landholding. The grid connection does not form part of the application. It has been demonstrated that the area has viable wind speeds and is suitable for the proposed development.

The site is located within the 'Central Lowlands' landscape character area, which is deemed to be moderately sensitive to development and with the capacity to absorb a range of developments subject to appropriate mitigation measures. The Landscape and Visual Impact Assessment demonstrates that landscape and visual impacts from the turbine will not be significant. The submitted photomontages are an accurate illustration of how the turbine would appear in the landscape. Where views are available they will be intermittent and the full extent of the turbine will not be visible. No protected views, prospects or scenic routes will be affected.

A Shadow Flicker Assessment was submitted and a shadow flicker prevention system will be installed to prevent any impacts on one sensitive receptor. This can be adequately addressed by condition. The Noise Impact Assessment indicates that the 35 dB limit set out in the Draft 2009 Guidelines will be met at all sensitive receptors except applicant's dwelling. A planning condition can be attached to the permission to ensure the required noise limits are adhered to and to ensure effective monitoring.

The content of the submitted CEMP has been assessed and outstanding matters can be addressed by conditions. There is a 251m separation distance to the nearest watercourse which provides a sufficient buffer zone to protect surface water. There are no bored wells within 400m of the proposed turbine that provide domestic water supplies. Foundation drawings have been submitted.

Third party submissions have been reviewed and the further information satisfactorily addresses the concerns raised in the submissions.

It is recommended that permission be granted subject to conditions.

Other Technical Reports

There are various technical reports on the file and the matters raised were addressed in the further information request. The following details the reports received in response to further information.

The **Environmental Department** report of 15th July 2022 raised no objection to the proposal subject to conditions.

The **Municipal District Engineer's** report considers there is no roads related reason to refuse permission and recommends a grant of permission subject to conditions.

5.0 Prescribed Bodies

The **IAA** in their response of 19th July 2022 raised no objection to the proposed development subject to standard type conditions relating to notification requirements, obstacle data etc.

The **Department of Housing, Local Government and Heritage** in their response of 27th July 2022, raised no objection to the development subject to conditions, including a requirement for Archaeological Impact Assessment (including archaeological test excavations).

6.0 Planning Authority Decision

The planning authority decided to grant permission for the development subject to 26 no. conditions. Apart from standard type construction and engineering conditions, the decision includes the following conditions of note:

Condition 2: Relates to the position of the turbine, its dimensions and colour.

Condition 3: Operational life of 25 years.

Condition 4: Permission does not provide consent/agreement for a connection to the national grid.

Condition 5: Noise limits.

Condition 6: Shadow flicker requirements.

Condition 14: Construction and Environmental Management Plan.

Condition 18: Archaeological assessment.

Condition 26: Development contribution.

7.0 Planning History

No details of any relevant planning history relating to the subject site has been forwarded by the planning authority or the applicant. In the wider area the planning authority has issued a decision to grant permission for a dwelling house and wastewater treatment system to the northwest of the subject site under Reg Ref No 21425, which is the subject of an appeal to the Board (ABP 313186).

8.0 Policy Context

The operative the development plan is the **Carlow County Council Development Plan 2022-2028**.

Chapter 7 of the development plan is dedicated to Climate Action & Energy. It contains policies and objectives that support the production of energy from renewable resources subject to compliance with proper planning and environmental considerations (RE P1 & RE O1).

The Plan seeks to increase the penetration of wind energy in the county at appropriate locations and scale (WE.01) and supports micro-energy generation (ME 01) to meet the energy needs of a home, business or community at appropriate locations and subject to compliance with proper planning and environmental considerations.

9.0 The Appeal

There are 2 no. third party appeals against the planning authority's decision to grant permission for the proposed development. The appeals are summarised below.

1. Cyril Murphy

The submission which is made on behalf of Cyril Murphy by Peter Sweetman & Associates raises the following issues:

Non-compliance with the requirements of the Habitats Directive

- Notes the judgement of the High Court in Kelly-v-An Bord Pleanala [2014] IEHC400. The site lies in close proximity to the River Barrow & River Nore SAC (Site code 002162). The AA Screening Report fails to consider that the development has the potential to have a significant effect and does not produce evidence that with reasonable scientific certainty, this will not take place.

Non-compliance with the requirements of the SEA Directive

- Refers to CJEU Case 24/19 stating that this is relevant to the current case. A wind farm decision was challenged on the basis that it had been permitted based on conditions outlined in a regional government order from 2006 and a circular on the assessment framework and conditions for the installation of wind turbines. The Court found that the order and circular constituted 'plans or programs' under the SEA Directive and that SEA should have been carried out prior to their adoption by the Belgian government. Both the order and circular contained various provisions in relation to the installation and operation of wind turbines, including measures on shadow flicker, safety and noise limits.
- The Court concluded that in cases where an SEA is required but is not carried out, the plan or program, as well as all permissions for projects based on same, must be annulled.
- The Irish policy for windfarms is based on the National Renewable Energy Action Plan (N-REAP) which was adopted in 2010 and subsequently on the National Energy and Climate Plan 2021-2030. Both were adopted without

SEA, which is an EU obligation. The failure to carry out SEA has significant consequences as the Court of Justice re-affirmed the rule that projects consents are illegal if they are adopted in breach of a Member State's EU law obligations. There are only limited circumstances where such consents would be allowed to stand, such as where there would be a significant impact on national electricity supply if the project was not undertaken or continued. That would not be the case in this instance.

Wind Energy Development Guidelines 2006

- The Ministerial Guidelines issued under section 28 of the PDA 2000, were expressly published to guide planning decisions in relation to wind energy development planning applications and comprise a 'plan or programme'. As no prior SEA was completed in respect of the 2000 Wind Energy Development Guidelines, they could not have been relied upon as a valid basis for granting planning permission in this case.

2 Emma Bolger & Thomas Millar

The Board is requested to refuse permission for the development on the following grounds

- The proposed development would result in severe adverse impacts on the landscape character and the visual amenities of the area and would therefore be contrary to the provisions of the Carlow County Development Plan 2022-2028.
- The application relies upon national policy documents which the Board is obliged as a matter of law to disregard.
- The information presented in relation to noise impact on appellants' homes which are c.710m and 585 m respectively from the proposed wind turbine, is fundamentally deficient.
- The development is premature in the absence of permission for a grid connection.
- The proposed turbine is grossly oversized for its stated purpose.

The grounds of appeal are elaborated upon as follows:

An Bord Pleanála obligations under the SEA Directive 2001/42/EC

- The application relies on and claims to be justified by reference to the Wind Energy Guidelines 2006. The Guidelines were not subject to SEA and this omission deprives the Board of any legal jurisdiction to consider the 2006 Guidelines as in any way relevant to its consideration of the application. Reference is made CJEU judgement in Case -24/19

Noise

- Noise from wind farms may have adverse health consequences (WHO 2018).
- Attached literature shows that reliance in the Noise Impact Assessment on ETSU and Draft Revised Wind Energy Development Guidelines (both of which are relied upon by the developer in this case) is outdated and inappropriate for the purpose of noise impact assessment.
- In October 2016 the Minister for Communications, Climate Action and Environment acknowledged that the 2006 Guidelines are not fit for purpose. Consultant Acoustician Dick Bowler published a critique of ETSU-R-97 which is crucially important to understanding applicants flawed basis of assessment.
- It appears to be that the Board refuses to give weight to any evidence that reflects real world impacts. The refusal of the Board to hear both sides was identified and condemned in the Supreme Court in *Balz and Heuback v An Bord Pleanala [2019] IESC 90*. The Court found that the Board had only considered the developer's evidence on noise impact assessment and had expressly refused to consider the expert evidence on assessing wind turbine noise impacts submitted by local residents.
- The Board is requested to inform itself of more recent research in the field. Four reports are attached which will equip the Board with objective expert information on why the historical approach to predicting noise impact is outdated, unreliable and no longer effective.

Refers to a number of cases where the High Court has made orders in favour of Plaintiffs in which excessive wind turbine noise caused unlawful nuisance resulting in actual harm. Each of the wind farms had secured planning permission on the basis of modelling predictions and professional assurances that there would be no significant adverse impacts on nearby homes.

Amplitude modulation

- Amplitude modulation (AM) is not addressed or assessed in the application.
- Refers to research carried out which suggests that audible AM occurred indoors at residences located as far as 3.5km. While the average noise at night may superficially appear to be acceptable for conditioning purposes, it will gloss over highly intrusive noise episodes of short duration which cause significant sleep disruption. An averaging approach is therefore not appropriate for assessing impacts on local residents. Other research examines the factors influencing its occurrence at windfarms in the UK and Japan.

The appeal is supported by a number of enclosures.

Observer

Josie Nolan

- The Planning Officer's contention that the proposed turbine would only moderately impact on the landscape is incorrect.
- Photographs attached of a turbine that was 20m shorter and which was refused permission by Carlow Co Council shows that this statement is incorrect.
- The turbine was relocated to c 500ft from its original location in response to further information request. Should this have involved a new planning application?.
- The proposed turbine is to run a dairy farm and has no bearing on national and regional policy regarding the development of sustainable and renewable energy resources.
- The proposal does not comply with the policies of the Carlow Co. Development Plan 2022-2028.
- The proposed turbine is sited in a prominent location in a sensitive landscape with open exposed vistas,
- The Noise Impact Assessment refers to the Draft Wind Energy Development Guidelines which have not been adopted.

First Party

No response to the grounds of appeal were submitted by the applicant.

Planning Authority Response

The planning authority in its response of 15th September, 2022 stated that it had no further comments to make and that its position is addressed in the reports on the file.

10.0 Assessment

Introduction

I consider that the main issues that arise for determination by the Board in respect of the appeal relates to the following:

- Principle of the development.
- Landscape and visual impact.
- Residential amenity.
- Legal issues.
- Appropriate Assessment.
- Other matters.

Principle of the development

The proposal is to erect a single turbine on the site that will generate renewable energy, which will be consumed by the existing farm. The applicant states that this will help to sustain the viability of the agricultural enterprise by reducing dependency on imported electricity.

There is a presumption in favour of micro-renewable energy installations in the development plan as set out in the following objective:

MG 01: *Support and facilitate micro-renewable energy installations at appropriate locations and scale, and subject to proper planning and environmental considerations.*

The proposal will produce electricity from wind which will reduce the quantity of electricity used by the farm that is produced from fossil fuels. Although small in scale, it accords with international, national, regional and local climate change policy which seeks to increase the quantity of electricity produced from renewables and

reduce greenhouse gas emissions. The applicant's response to further information confirms that the area has an adequate wind resource to make the project viable.

Having regard to the positive attitude to micro-energy installations in the development plan, I would accept that the proposal is therefore acceptable in principle subject to matters relating to proper planning and sustainable development which are considered in more detail below.

Landscape and Visual amenity

Issues have been raised in the submissions regarding the potential impact of the proposed wind turbine on the landscape and visual amenities of the area. A Landscape Visual Impact Assessment was submitted in response to further information, which includes a number of photomontages showing the potential visibility of the turbine in the landscape from different locations and at varying distances from the site. I note that the locations of the viewpoints were chosen in consultation with the planning authority.

The new county development plan came into force on July 4th, 2022 and following the receipt of the further information by the planning authority. The Landscape Character Assessment is contained in Appendix 7. There have been no changes in the plan to the landscape designation as it applies to the subject site, which remains within the 'Central Lowlands' character area. The majority of the County lies within this landscape character area which has open views and vistas, notably on ridge farmland. It is recommended that new developments should not be sited in prominent locations such as ridges with open exposed vistas. This landscape character area is considered to have a Moderate sensitivity to wind farms.

The Policy Objectives that apply to the Central lowlands are as follows:

Conservation, restoration and enhancement of the existing landscape character.

New developments to maintain integrity of landscape character area through careful location, siting and design.

The site lies within the 'Farmed Ridges' landscape type. This landscape type has a sensitivity rating of 4 out of 5, with 5 being the most sensitive.

The proposed turbine will be located within a large expansive field against a backdrop of gently rising ground. It will be set back from the adjoining local road by a distance of c. 500m. I would point out to the Board that the location of the proposed

turbine was revised to ensure a separation distance of 500m to a proposed dwelling which is currently the subject of an appeal (ABP 313186). The new location is shown on the revised site location map submitted in response to further information (Drawing No J734-PL04B-001) and is at a slightly lower elevation than originally proposed.

The turbine, with a stated tip height of 88.5m will be the tallest feature in the local landscape and it will not be possible to fully mitigate this effect. However, due to the undulating nature of the surrounding landscape, the screening afforded by existing boundary hedgerows/trees and existing buildings and structures, only the higher elements of the turbine will be visible from most locations. The turbine will be visible from dwellings on higher ground to the north but its impact will be mitigated by distance.

The views of the turbine will be most prominent in the immediate vicinity of the site but will be curtailed by applicants farm buildings and boundary trees. With increased distance, landform and buildings play a significant part in mitigating effects in all directions including to the south where there are more open views. There will be locations where the upper sections are visible, but this will be intermittent and will not be so significant such that it would seriously detract from the landscape character or the visual amenities of the area. While I acknowledge the sensitivity rating afforded to the landscape in this location, it is not pristine and houses at high elevations are evident both on the ridge to the north and on the local road to the southwest. I would also point out to the Board that the development plan support for micro-renewable energy installations extends into the areas with highest sensitivity rating (Upland Landscape Types) where wind farms would not normally be permissible:

WE. P4: *Wind energy development will not normally be permissible in the Uplands Landscape Typethis provision shall not apply to micro energy generation and community energy projects where deemed appropriate and subject to compliance with proper planning and environmental considerations.*

Having inspected the site and its surroundings, I would conclude that the landscape in this location has the capacity to absorb the proposed development without significantly adverse effects. I would also note that there are no designated scenic

routes or scenic views that would be significant and adversely affected by a single turbine in this location.

I would therefore concur with the conclusion reached by the planning authority that the proposed development, consisting of a single wind turbine would not significantly impact on the character of the landscape and the visual amenities of the area.

Residential amenity

It is contended by the appellants that noise associated with the proposed turbine will impact on the residential amenity of nearby dwellings.

The Wind Energy Development Guidelines 2006 or the Draft Wind Guidelines 2019 do not set out any specific advice in relation to single turbines. The Noise Assessment submitted in response to further information refers to the 'Good Practice Guide to the Application of ETSU-R-97 for the Assessment & Rating of Wind Turbine Noise (IoA, 2013) which considers a simplified methodology may be suitable for single wind turbines. It states:

For single turbines a simplified noise condition may be suitable. It states that if the noise is limited to an $L_{A90\ 10\ min}$ of 35 dB(A) up to wind speeds of 10m/s at 10m height this condition alone would offer sufficient protection of amenity and background noise surveys would be unnecessary.

In light of this guidance, a background noise survey was not conducted to support the assessment. It is proposed to install a Vestas V47-660/200 660kW turbine. Noise modelling was conducted using DGMR iNoise v 2022 Pro software. Noise data provided by the manufacturer was used to predict noise levels at 13 no. dwellings in the vicinity of the site. Table 5 of the assessment shows the predicted $L_{AF\ 90\ min}$ levels at these locations. It indicates that a 35dB limit will be met at wind speeds of 8m/s at all sensitive receptors, with the exception of the closest house to the southeast (465m from the proposed turbine). The predicted noise levels at this house which is in the ownership of the applicant is 36dB (Table 5).

The noise assessment concludes that mitigation measures are not necessary but noise monitoring during commissioning is recommended to confirm compliance with the 35 dB limit. I note that the Environment Department of Carlow Co. Council have raised no issues with regard to the assessment and have recommended that a condition be attached specifying an upper limit of $L_{A90\ 10\ mins}$ 35dB at sensitive

receptors and that a programme of noise monitoring be established following commissioning of the turbine.

The appellants contend that the Wind Energy Development Guidelines 2006 and ETSU-R-97 are out of date and not fit for purpose. They refer to the Supreme Court judgement in the case of Balz and Heuback v An Bord Pleanála [2019] IESC 90 and the need to avoid continued reliance on outdated guidance or the exclusion of other research and scientific material to demonstrate their inadequacy.

A paper prepared by Dick Bowdler (New Acoustics) is attached to the appeal by Emma Bolger & Thomas Millar, which is highly critical of ETSU-R 97. The purpose of the paper is unclear and there is no indication that it represents anything other than the individual opinion of Mr Bowdler. The paper which is dated July 2005 predates the publication of the 2006 Wind Energy Development Guidelines and the 2013 Institute of Acoustics (IoA) Good Practice Guide to the Application of ETSU -R 97, which underpin the applicants noise assessment. This would suggest that the paper is not part of an emerging scientific consensus among noise specialists.

The 2006 Guidelines are derived from ETSU and I note that the Draft Guidelines 2019 adapt the 2013 approach to the IoA application of ETSU-R-97. There is no evidence of scientific consensus that this document or the guidelines which reference it are no longer adequate.

The existing Wind Energy Development Guidelines 2006 have not been withdrawn and the proposed replacement 2019 guidelines remain in draft form. The adopted guidelines remain the relevant section 28 guidelines, to which the Board must have regard. In the absence of convincing evidence or scientific consensus that the existing 2006 Guidelines are inadequate, I consider that the application of the Wind Energy Development Guidelines 2006 is appropriate. The Board clearly accepts that the application of these limits is acceptable to protect the amenity of residential property. I would point out to the Board that I am in no position to comment on cases brought before the Courts by individuals and referred to in the appeal made on behalf of Emma Bolger & Thomas Millar.

I would therefore conclude that it is reasonable for the Board to apply its standard condition relating to noise levels which are in compliance with the current Guidelines.

Regarding amplitude modulation (AM), the appeal by Emma Bolger & Thomas Millar is supported by research papers and papers presented at conferences, which

examine the occurrence and characteristics of AM and factors influencing its occurrence at windfarms in and around the UK and Japan. There is also reference to research conducted at a South Australian wind farm, which was the subject of complaints from local residents. The report which was published in the Journal of Sound and Vibration in 2019, indicates that AM remains audible both indoors and outdoors at significant distances from a wind farm site. While I would note the case referred to which involved a large wind farm (37 no turbine reach with a rated power of 3MW) and the subject proposal being for a single turbine are not directly comparable), I accept that research in this area is ongoing and it is recognised that where AM does occur, such noise can cause annoyance at lower levels than noises without such characteristics.

I note that it is not possible to predict an occurrence of AM at planning stage and specific measurement techniques are required to quantify. While I note that it is not current practice to assign a planning condition to deal with AM, the Board may consider it appropriate to do so, should it be minded to grant permission for the development.

Shadow flicker is not specifically raised in the appeal but it can be a source of annoyance to sensitive receptors. I note that a Shadow Flicker Assessment was submitted in response to further information, which identifies 2 no properties within 500m of the site with the potential to experience effects. The property to the northwest is located c 500.55m from the proposed turbine and is the subject of a current appeal (ABP 313186). The house to the southeast (464.75m) is an occupied dwelling in applicants ownership.

The modelling undertaken as part of the assessment indicates that the recommended shadow flicker limits of 30 hours per year or 30 minutes per day as set out in the Wind Energy Development Guidelines 2006 will not be exceeded at either dwelling. There is potential for shadow flicker to occur at the property to the northwest (0.58hours per year). The Draft Revised Wind Energy Development Guidelines 2019 recommends that shadow flicker should not occur at any property. To mitigate any potential shadow flicker effects the applicant proposes to install a shadow flicker prevention system which will turn off the turbine when shadow flicker is likely to occur. Subject to this mitigation measures, which can be adequately addressed by condition, no significant effects are likely to occur which would impact on the amenity of this proposed residential property.

Legal Issues

The appellants state that the Board has no legal jurisdiction to consider the application, referring to the implications of the CJEU judgement in case C-24/19. It is contended that as the National Renewable Energy Action Plan (NREAP), the Climate Action Plan 2021-2030 and the Wind Energy Guidelines 2006 were adopted without carrying out SEA, the Board is precluded from granting planning permission. It is further contended that where an SEA is required but is not carried out, the plan or programme as well as permissions for project based on same, must be annulled.

Notwithstanding the judgement in the case C-24/19, as noted above, the Wind Energy Development Guidelines 2006 have not been revoked and the proposed replacement 2019 guidelines remain in draft form. Having regard to the obligation placed on the Board under section 28 of the Act, I consider that the 2006 guidelines remain the relevant guidelines to which the Board must have regard in determining this case.

With regard to the NREAP and the Climate Action Plan, I do not consider that the failure to undertake SEA of these plans would preclude the Board from granting planning permission, since there is clear policy support at European, national and local level for renewable energy projects, including wind energy at suitable locations.

Appropriate Assessment

There are 2 no. reports on the file from the DAU. The first report dated 16th August 2021 notes that there is potential for significant effects on the River Barrow and River Nore SAC (Site code 002162). The second report following the receipt of further information does not refer to nature conservation. This may have arisen as the further information request did not raise any issues regarding appropriate assessment.

The subject application is not supported by an AA Screening Report or an NIS. The Planning Officer's report dated 23rd August 2021 completed an Appropriate Assessment Screening Report (Appendix 1). It notes that the location of watercourses close to the site and the potential for hydrological connectivity with the SAC and concludes that a full and comprehensive screening determination for appropriate assessment could not be made until responses to the further information requested are received. The request for further information did not require the applicant to submit a screening report.

The planning officers second report of 8th August 2022 following the receipt of further information included another Appropriate Assessment Screening Report (Appendix 2). It which concluded that having regard to the nature and extent of the proposed development and taking account of the further information received, the proposed development on its own or in combination with other plans or projects, would not be likely to result in significant effects on the European site and that Appropriate Assessment is not required. In reaching this determination, the planning authority appears to have relied on mitigation measures outlined in the CEMP to reduce impacts on the water environment.

The planning officer's screening report states that nearest watercourses to the site are stated to be located c 200m to the north, c 400m to the east and c 251m to the southeast. These watercourses are stated to have hydrological connections to the SAC via tributaries of the River Barrow. I accept that in the absence of mitigation, it is not possible to rule out the potential for significant effects on the River Barrow and River Nore SAC (Site code 002162) and that Appropriate Assessment is therefore required.

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

River Barrow and River Nore SAC

- 10.1. The site as described in the NWPS site synopsis consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford.

The site is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes 1 and 11 of the EU Habitats Directive. Annex 11 animal species include Freshwater Pearl Mussel, White-clawed Crayfish, Salmon, Twaite Shad, three lamprey species, Desmoulin's Whorl Snail and Otter. This is the only site in the world for the hard water form of the Freshwater Pearl Mussel (limited to a 10km stretch of the River Nore) and one of only a handful of spawning grounds in the country for Twaite Shad. The freshwater stretches of the River Nore main channel is a designated salmonid river.

The main threats to the site and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and several sewage plants overgrazing in woodland areas and non-invasive species.

Site specific conservation objectives have been published for the site with the overall objective being to maintain or restore the favourable conservation condition of the Annex 1 habitat(s) and/or Annex 11 species for which the site is selected.

The qualifying interests of the SAC are listed below, with those likely to be impacted by the works highlighted in bold.

European site (SAC/SPA)	Qualifying Interests
River Barrow and River Nore SAC (Site code: 002162)	<ul style="list-style-type: none"> • Estuaries • Mudflats & Sandflats • Reefs • Salornica and other annuals colonising mud and sand • Atlantic salt meadows • Water courses of plain to montane levels • European dry heaths • Hydrophilous tall herb communities • Petrifying springs • Old sessile oak woods • Alluvial forests • Desmoulin's Whorl Snail • Freshwater Pear Mussel • White-clawed Crayfish • Sea Lamprey • Brook Lamprey • River Lamprey • Twaite Shad • Salmon • Otter • Killarney Fern • Nore Pearl Mussel •

*Qualifying Interests likely to be significantly affected highlighted in bold

The qualifying habitats for which the site is selected will not be impacted by the proposed development due to the considerable separation distance between the development site and the SAC and the assimilative capacity of intervening waterways. This includes estuarine/marine habitats (*estuaries, mudflats & sandflats, Reefs, Salornica mud, Atlantic salt meadows and Mediterranean salt meadows*). Other habitats will not be impacted due to lack of ecological connectivity, distance and lack of presence within/adjacent to the site (*European dry heaths, Hydrophilous tall herb communities, Petrifying Springs, Alluvial forests, Old sessile oak woods, Killarney Fern*). The likely significant effects on one habitat (*Water courses of plain to montane levels*) are uncertain as its full distribution within the SAC is unknown.

With regard to qualifying species, effects on *Desmoulins Whorl Snail* can be ruled out as it occurs a considerable distance downstream. *Nore Pearl Mussel* is confined to the River Nore and not found in the River Barrow and the status of *Freshwater Pearl Mussel* as a qualifying Annex 11 species for the SAC is currently under review. *Twaite Shad* is an anadromous species with adult fish migrating from saltwater to spawn in freshwater rivers. The main spawning ground is in the lower reaches of the River Barrow and not within the zone of influence of the proposed development.

There are records of *White-clawed Crayfish* downstream. The three lamprey species (Sea, River and Brook) have been recorded in the main channel of the River Barrow. *Salmon* have also been recorded and Otter is likely to be widespread across freshwater habitats.

On the basis of the foregoing, I would conclude that likely significant effects are uncertain in the case of the one habitat (*Water courses of plain to montane levels*) and 6 no. species (*White-clawed Crayfish, Sea, Brook and River Lamprey, Salmon and Otter*).

Potential impacts during construction

The proposal involves the erection of a single turbine which will be connected to a substation (25m²) via an underground grid connection. The works will include site clearance including soil stripping, excavation and the construction of foundations. A construction compound will be provided for storage of materials and the provision of welfare facilities. These activities create the potential for the migration of sediment and other pollutants to nearby watercourses.

The construction stage has the potential, in the absence of mitigation to result in indirect effects on Floating River Vegetation, White-clawed Crayfish, Sea, Brook and River Lamprey, Salmon and Otter associated with a reduction in water quality as a result of sediment laden water or other pollutants entering the water course.

No impacts on the SAC or its qualifying interests are likely following the completion of construction.

Potential in-combination effects

The site is located in a rural area and high inputs of nutrients into the river system from agricultural run-off is identified as a threat to the SAC. However, as impacts on the SAC are not predicted as a result of the proposed development, the potential for agricultural development/operations to act in combination and create cumulative effects does not arise. I accept that subject to the mitigation measures proposed to be implemented as part of the works, the potential for cumulative effects will not arise.

Mitigation Measures

The CEMP submitted in response to further information sets out the mitigation measures that will be employed to minimise the risk of sediment and other pollutants entering watercourses. These are standard best practice measures to protect water quality and include the provision of silt fencing around the boundary of the works/ stockpiled material to prevent the migration of silt. It is proposed to use settlement lagoons to remove suspended solids and no direct discharges to any watercourse will occur. Standard best practice will be adhered to in terms of stockpiling/management of excavated soil/materials to prevent erosion, surface water run-off, storage of fuel/oil/chemical and other hazardous substances and refuelling of plant/machinery to prevent pollution of the watercourse.

Subject to the implementation of these measures, I accept that no significant effects are likely on the qualifying habitats and species, in view of their conservation objectives. Following the completion of the works, no significant effects on water quality within the SAC are likely to arise.

Having regard to the nature of the proposed development which involves a minimal amount of excavation and intrusive ground works, the mitigation measures proposed which are proven best practice, I consider that it is reasonable to conclude that the proposed development, individually or in combination with other plans and projects would not adversely affect the integrity of the River Barrow and River Nore SAC (Site code 00002162), or any other European site

No mitigation measures are considered necessary post construction, in view of the site's Conservation Objectives.

Conclusion on Appropriate Assessment

Having regard to the nature of the proposed development which involves a minimal amount of excavation and intrusive ground works, the mitigation measures proposed which are proven best practice, the information presented with the application, including the Construction and Environmental Management Plan, I consider that it is reasonable to conclude that the proposed development, individually or in combination with other plans and projects would not adversely affect the integrity of the River Barrow and River Nore SAC (Site Code: 002162) in view of the site's Conservation Objectives.

This conclusion is based on:

- the limited scale of the works proposed,
- the significant distance to the SAC and the diluting effects of intervening waters,
- avoidance of direct impacts on qualifying habitats and species of the European site.
- prevention of potential indirect effects on the qualifying habitats and species of the European site by the implementation of standard best practice and proven mitigation measures.

This assessment is based on a complete assessment of all aspects of the proposed development and there is no reasonable doubt remaining as to the absence of such effects.

Other Matters

In response to the argument that the relocation of the proposed wind turbine wind turbine should have necessitated a new planning application, I note that the location of the turbine was revised to ensure a 500m separation distance to a proposed house, which is currently the subject of an appeal (ABP 313186). The revised plans provide an amended red line boundary, within the applicant's landholding.

Having regard to the minor alteration proposed and the location of the proposal within the applicants landholding and within the same agricultural field, I do not consider that its relocated position (c 160m southeast of its original position) would result in a significant material alteration to the proposal to warrant the submission of a new application. New public notices were published following the receipt of further information, ensuring that third parties rights were not compromised.

In response to the assertion that alternatives such as solar farm should be considered, the Board can only adjudicate on the proposal before it, which in this case is for a single wind turbine.

Regarding potential impacts on human health, it is generally accepted that the operational stage of a windfarm has the potential to impact on the human environment arising from shadow flicker, noise and visual impacts. Subject to the implementation of a curtailment strategy no significant effects are likely to arise from shadow flicker. The result of the noise assessment indicates that the operational wind farm can meet the noise criteria set out in established guidance to protect residential amenity and human health. Visual impact will be highly localised and the substation and lower sections of the turbine will be partially screened by existing hedgerows, landform and buildings, which minimises potential impacts in the wider environment. The project will have a minor net benefit on human health in the long-term by contributing to the production of clean renewable energy.

I consider that the issues raised regarding impacts on biodiversity and potential contamination of ground water are unfounded having regard to the limited land take associated with the proposed development and the shallow depth of the foundation. Similarly, there are no tourism assets or amenities in close proximity to the site which would be impacted by the development.

11.0 Recommendation

- 11.1. On the basis of the above assessment, I recommend that the Board **Grant Permission** for the proposed development for the Reasons and Considerations set out below.

12.0 Reasons and Considerations

It is considered that subject to compliance with the conditions set out below, the proposed development would be acceptable in terms of the landscape character and visual amenities of the area, would not seriously injure the amenities of property in the vicinity, would not significantly impact on biodiversity or the archaeological resource, would be acceptable in terms of traffic safety and convenience and would, therefore be in accordance with the proper planning and sustainable development of the area.

13.0 Conditions

1. The proposed 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 submitted on the 1st day of June, 2022 except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

Reason: In the interests of clarity.

2. The mitigation measures identified in the Construction and Environmental Management Plan and other plans and particulars submitted with the application shall be implemented in full.

Reason: In the interests of clarity and the protection of the environment.

3. This permission shall be for a period of 25 years from the date of first commissioning of the wind turbine.

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

4. The wind turbine have a tip height of 88.5m, a hub height of 65m and a blade length of 23.5m (as detailed on Drawing Number J734-PL04A-001 submitted to the planning authority on June 1st, 2022)

Reason: In the interests of clarity and proper planning and development.

5. This permission shall not be construed as any form of consent or agreement to connection to the national grid or to the routing or nature of any such connection.

Reason: In the interests of clarity and proper planning and development.

6. The construction of the development shall be managed in accordance with a Construction Environmental Management Plan (CEMP), which shall be submitted to and agreed in writing with the planning authority prior to commencement of development This plan shall provide details of the intended construction practice for the development, including:

- location of the construction compound including the area identified for the storage of waste;
- location of areas for construction site office and welfare facilities;
- details of on-site parking facilities for site workers during the course of construction;
- details of the location of the sediment features/barriers required to protect water quality during construction;
- measures to prevent the spillage or deposit of clay, rubble or other debris on the public road network;
- containment of all construction related fuel and oil within specially constructed bunds to ensure that fuel spillages are fully contained. Such bunds shall be roofed to exclude rainwater;
- Invasive Species Management Plan;

A record of daily checks that the works are being undertaken in accordance with the Construction and Environmental Management Plan shall be retained for inspection by the planning authority.

. Reason: In the interest of protecting the environment.

7. . Prior to commencement of development, a traffic management plan for the construction phase shall be submitted to, and agreed in writing with the planning authority. The traffic plan shall incorporate the following:
- i. Details of the road network/haulage routes and the vehicle type to be used to transport materials to and from the site and a schedule of control measures for exceptionally wide and heavy delivery loads.
 - ii. A condition survey of the roads and bridges along the haul routes shall be carried out at the developer's expense by a suitably qualified person both before and after the construction of the proposed development. This survey shall include a schedule of required works to cater for constructed related traffic. The extent and scope of the survey and the schedule of works shall be agreed with the planning authority 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
 - iv. Details of construction related directional and road safety signage.
 - All works arising from the aforementioned arrangements shall be completed at the developer's expense.

. Reason: To protect the public road network.

8. . Construction works shall be confined to between 08.00 and 18.00 hours Monday to Friday inclusive and between 08.00 hours and 16.00 hours on Saturdays and not at all on Sundays or Bank Holidays.

. Reason: To safeguard the amenities of property in the vicinity.

9. . Water supply and drainage arrangements, including the attenuation and disposal of surface water, shall comply with the requirements of the

planning authority for such works in respect of both the construction and operation phases of the development

. **Reason:** In the interests of environmental protection and public health.

10. The developer shall comply with the following shadow flicker requirements:

. (a) Cumulative shadow flicker arising from the proposed wind turbine shall not exceed 30 minutes in any day of 30 hours in any year at any dwelling.

. (b) The proposed turbine shall be fitted with appropriate equipment and software to control shadow flicker at dwellings.

. **Reason:** In the interests of residential amenity.

11 The operation of the proposed wind turbine, by itself or in combination with other permitted wind energy development, shall not result in noise levels when measures externally at nearby noise sensitive locations, which exceed:

(a) Between the hours of 0700 and 2300:

i the greater of 5 dB(A) $L_{90, 10 \text{ mins}}$ above background noise levels, or 45 dB(A) $L_{90, 10 \text{ mins}}$, at standardised 10-meter height above ground level wind speeds of 8m/s or greater

ii 40 dB(A) $L_{90, 10 \text{ mins}}$ at all other standardised 10-meter height above ground level wind speeds

(b) 43 dB(A) $L_{90, 10 \text{ mins}}$, at all other times

Prior to commencement of development the developer shall submit to and agree in writing with the planning authority, a noise compliance monitoring programme for the subject development, including any mitigation measures. All sound measurements shall be carried out in accordance with ISO Recommendation R 1996 "Assessment of Noise with respect to Community Response" as amended by ISO Recommendations R 1996 1. The results of the initial noise compliance monitoring shall be submitted to and agreed in writing with the planning authority within three months of the commissioning of the wind turbine.

. **Reason:** In the interests of residential amenity.

12 The wind turbine, including mast and blades shall be finished externally in a light grey colour.

Reason: In the interests of visual amenity

13 Details of the materials, colours and textures of all the external finishes of the proposed substation building and enclosing fence shall be submitted to and agreed in writing with the planning authority prior to commencement of the development.

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

14 All lighting within the site shall be cowled to prevent overspill outside the site.

Reason: To reduce impacts on local biodiversity.

15 The developer shall ensure that all plant and machinery used during the works should be thoroughly cleaned and washed before delivery to the site to prevent the spread of hazardous invasive species and pathogens.

Reason: In the interest of proper planning and sustainable development and to prevent the spread of hazardous invasive species and pathogens.

16 Details of aeronautical requirements shall be submitted to and agreed in writing with the planning authority prior to commencement of the development. Prior to the commissioning of the turbine, the developer shall inform the planning authority and the Irish Aviation Authority of the as constructed tip height and co-ordinates of the turbine.

Reason: In the interests of air traffic safety.

17 The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist on the site. In this regard, the developer shall-

- a. notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) in relation to the development,
- b. employ a suitably qualified archaeologist who shall monitor all site investigations and other excavation works.

- c. provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.

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

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

- 18 In the event that the proposed development causes interference with telecommunications signals, effective measures shall be introduced to minimise interference with telecommunications signals in the area. Details of these measures, which shall be at the developer's expense, shall be submitted to, and agreed in writing with the planning authority prior to commissioning of the turbine and following consultation with the relevant authorities.

Reason: In the interests of the protection of telecommunications signals and of residential amenity.

- 19 The developer shall pay to the planning authority a financial contribution of €3,200 (three thousand two hundred euro) in respect of public infrastructure and facilities benefiting development in the area of the planning authority that is provided or intended to be provided by or on behalf of the authority in accordance with the terms of the Development Contribution Scheme made under section 48 of the Planning and Development Act 2000, as amended. The contribution shall be paid prior to 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 An Bord Pleanála to determine the proper application of the Scheme.

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

Breda Gannon

Senior Planning Inspector

14th December 2022