An Bord Pleanála

# Inspector's Report

# ABP-310312-21

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| **Development** | Construct up to 8 no. wind turbines with a tip height of up to 185 metres and all associated foundations and hardstanding areas. An Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared in respect of the proposed development. |
| **Location** | Townlands of Dernacart Forest Upper & Forest Lower , Co. Laois |
| **Planning Authority** | Laois County Council |
| **Planning Authority Reg. Ref.** | 2078 |
| **Applicant(s)** | Statkraft Ireland. |
| **Type of Application** | Appeal. |
| **Planning Authority Decision** | Refuse |
| **Type of Appeal** | First & Third Party |
| **Appellant(s)** | First Party - Statkraft<br>Third Party – Mountmellick Wind Turbine Impact & Eco Advocacy. |

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| **Observer(s)** | None. |
| **Date of Site Inspection** | 25th August 2022. |
| **Inspector** | Sarah Lynch |

# Contents

## 1.0 Site Location and Description

1.1. The site is located within the townlands of Dernacart, Forest Upper and Forest and covers an area of 49ha. The site is accessed from the N80 via the site entrance at the L2092. The site comprises of bog, coniferous forest and pastures. A tributary of the Barrow river flows through the site and another flows to the east of the site. A cut over bog is present to the north and east of the site and to the south and west are agricultural lands.

1.2. The lands are relatively flat within the site and surrounding area. The nearest dwelling within the vicinity of the site, outside of the landowners is c. 740 metres from the site. The access lanes are lined with established hedgerows and trees and the lands are removed from any cluster or settlement of housing.

1.3. The site is c. 4km northeast of Mountmellick and is not visible from the surrounding public roads, albeit that the proposed development will be.

## 2.0 Proposed Development

2.1. The proposed development comprises of the following:

- 8 turbines with a tip height of 185 metres,
- Foundations and hard stand for each turbine,
- Construction of 1 no. entrance,
- Construction of c. 5.8km site access tracks,
- Upgrade of 0.89km of existing access tracks,
- Construction of temporary compound,
- Construction of drainage and sediment control systems,
- Construction of substation and ancillary structures,
- Installation of cables between turbines and substation,
- Temporary alteration to the public road at identified locations for turbine delivery,

- Associated site works including berms, landscaping, tree felling, peat excavation and installation of a meteorological mast 110m in height.

## 3.0 Planning Authority Decision

### 3.1. Decision

Laois County Council determined to refuse permission for the following reason:

In relation to the impact of the proposed development on bat species [classified as Annex 1V species under the Habitats Directive] the Planning Authority notes that six of the proposed turbines are located in high areas of activity for multiple bat species and the remaining two are placed in moderate / high areas of activity. This means there is a likelihood of direct mortality of sensitive protected species through collision and barotrauma events.

There is insufficient detail provided with respect to the bat population effect calculations and there is no attempt made to alter the location of the turbines to accommodate a lower impact threshold.

Impacts to bats are therefore identified to be significant and this is viewed to be a critical failing of the assessment process.

The proposed development would therefore seriously injure the amenities of the area and be contrary to the proper planning and sustainable development of the area.

### 3.2. Planning Authority Reports

3.2.1. Planning Reports

- The planners report is consistent with the decision of the Local Authority.

Further information was sought in relation to the following items:

- Details in relation to alternative sites considered.
- Place indicators in relation to the location of turbines and substation for LA to inspect.
- State precise number of turbines to be erected.

- States precise rotor diameter proposed.
- Confirm legal interest in lands.
- As precise rotor diameter was not stated, the shadow flicker assessment therefore required revisiting in order to properly assess the potential for impacts from shadow flicker to arise.
- The location of borrow pits was requested.
- Additional information required in relation to Hen Harrier as a response to the Department of Culture, Heritage and the Gaeltacht submission which stated that Hen Harrier roost in the area and in the Slieve Bloom SPA.
- Additional information requested in relation to Windtake and the impact to the future development of Bord na Mona landholdings adjacent to the site.
- Indicate the landowners dwelling location and distance from proposed development.
- Additional photomontages were requested.
- Additional noise monitoring to be carried out.
- Details of aggregate quantities to be imported to site.
- The applicants were asked to address the third party submissions in relation to visual impact, landscape impact, property devaluation, project splitting, residential impact, alternatives and sustainability.

3.2.2. Other Technical Reports

- Municipal Engineer – additional information required in relation to hydraulic survey of drains and road opening licence.
- Road Design – no objections subject to conditions.
- Chief Fire Officer – no objections subject to conditions.

## 3.3. **Prescribed Bodies**

- Transport Infrastructure Ireland – no observations

- Irish Aviation Authority – applicant to advise of crane use on site and provide site co-ordinates and implement conditions relating to aircraft safety.
- Department Culture, Heritage and the Gaeltacht – concerns that impacts to Hen Harrier have not been adequately assessed.
- No objection in terms of archaeology.

### 3.4. Third Party Observations

There was a total of 26 no. submissions to the planning application the issues raised within these submissions are summarised as follows:

- Impacts to Hen Harrier and other bird species.
- Forest is a replant site.
- Full ecological assessment is required.
- Concerns raised about flooding.
- Concerns about noise, in particular infrasound.
- Impacts to private wells.
- Property devaluation.
- Alternative power sources not considered.
- Impacts to wildlife.
- Premature pending the design of the Mountmellick flood relief scheme.
- Prejudicial to future planning applications for houses.
- Query regarding accuracy over land ownership.
- Non-compliant with habitats directive.
- Concerns over height and scale of the development.
- Health concerns.
- No plan for development, it was therefore not subject to SEA.
- Query regarding quantum of aggregates to be used in project.

- Development not in compliance with machinery directive.
- Increase in traffic.

## 4.0 Planning History

ABP307022 - preapplication determination in relation to the provision of the connection of the proposed Dernacart Wind Farm to the national grid at the proposed Bracklone 110kV substation. The proposed development was not considered to be SID.

There are 10 permissions within the vicinity of the proposed development site from 2004 to 2019 for dwelling houses.

2 no. applications were granted in relation to agricultural development i.e Laois County Council reference 17/224 and 07/1592.

## 5.0 Policy Context

### 5.1. Development Plan

**Laois County Development Plan 2021- 2027**

It is of note that the current statutory development plan for the County was adopted in January 2022 and is the Laois County Development Plan 2021-2027, the original application was assessed under the Laois County Development Plan 2017-2023. I note that there has not been any significant change in the policy position of the Council in relation to Wind Energy as outlined within the Wind Energy Strategy of the 2017 plan and that contained within Appendix 5 of the current development plan. The proposed development is therefore subject to the same policies and objectives as that of the original application to the Council.

Proposed development site is located within an area whereby wind energy is 'open for consideration', as identified within the Wind Energy map of the Laois County Development Plan.

**Policies**

- **CM RE 5** - Promote and facilitate wind energy development in accordance with the Guidelines for Planning Authorities on Wind Energy Development

(Department of Housing, Planning and Local Government) and any update thereof and the Appendix 5 Wind Energy Strategy of this Plan, the Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change, and subject to compliance with normal planning and environmental criteria.

- **CM RE 6 -** Ensure a setback distance for Wind turbines from schools, dwellings, community centres and all public roads in all areas open for consideration for wind farm development as per the Guidelines for Planning Authorities on Wind Energy Development (Department of Housing, Planning and Local Government).
- **CM RE 7** - Promote the location of wind farms and wind energy infrastructure in the 'preferred areas' as outlined on Map 3.2 to prohibit such infrastructure in areas identified as 'Areas not open for consideration' and to consider, subject to appropriate assessment, the location of wind generating infrastructure in areas 'open for consideration' and as per the Laois Wind Energy Strategy 2021-2027.
- **Section 3.5.5 WIND ENERGY -** The Local Authority will support the delivery on commitments under the Programme for Government (2020), which commit to a 7% average yearly reduction in overall greenhouse gas emissions over the next decade and to achieving net zero emissions by 2050.

**Wind Energy Strategy 2021-2027 Appendix 5 of County Development Plan 2021-2027**

- **WES 1:** Development of Renewable Energy Generation It is the policy of the Council to support, in principle and in appropriate scales and locations, the development of wind energy resources in County Laois. The future sustainable development of the County is dependent on a secure supply of energy. There is a need to promote the development of renewable energy to reduce dependency on fossil fuels and to comply with national and European polices with regards to renewable energy resources and to address the challenge of climate change. It will be an objective of the Council to ensure the security of

energy supply by accommodating the development of wind energy resources in appropriate areas and at appropriate scales in the county.

- **WES 2**: Development of Low Carbon Economy Laois County Council will seek to promote itself as moving towards becoming a low carbon County by 2018 as a means of attracting inward investment to the County and the wider Midlands region.
- **WES4:** Community Involvement and Gain Laois County Council will seek to promote community involvement and require community benefit where possible in proposed windfarm developments.
- **WES 6**: Areas Open for Consideration Wind energy applications in these areas will be evaluated on a case by case basis subject to viable wind speeds, environmental resources and constraints and cumulative impacts.
- **Section 6** – Development Control Standards for wind farms in County Laois.

**Eastern and Midland Regional Assembly RSES 2020**

The Strategy supports an increase in the amount of new renewable energy sources in the Region. This includes the use of wind energy – both onshore and offshore.

- **RPO 7.36**: Planning policy at local authority level shall reflect and adhere to the principles and planning guidance set out in Department of Housing, Planning and Local Government publications relating to 'Wind Energy Development' and the DCCAE Code of Practice for Wind Energy Development in Ireland on Guidelines for Community Engagement and any other relevant guidance which may be issued in relation to sustainable energy provisions.

**Project Ireland - National Planning Framework 2040**

The National Policy Position establishes the fundamental national objective of achieving transition to a competitive, low carbon, climate resilient and environmentally sustainable economy by 2050, this will be achieved by harnessing both the considerable on-shore and off-shore potential from energy sources such as wind, wave and solar.

- **NSO 8** Transition to a low carbon economy

It is an objective of the plan to deliver 40% of our electricity needs from renewable sources by 2020 with a strategic aim to increase renewable deployment in line with EU targets and national policy objectives out to 2030 and beyond.

**Ireland's Transition to a Low Carbon Energy Future 2015-2030**

This document is a complete energy policy update, which sets out a framework to guide policy up to 2030. Its objective is to guide a transition, which sets out a vision for transforming Ireland's fossil fuel-based energy sector into a clean, low carbon system. It states that under Directive 2009/28/EC the government is legally obliged to ensure that by 2020, at least 16% of all energy consumed in the state is from renewable sources, with a sub-target of 40% in the electricity generation sector. It notes that onshore wind will continue to make a significant contribution but that the next phase of Ireland's energy transition will see the deployment of additional technologies as solar, offshore wind and ocean technologies mature and become more cost-effective.

**Climate Action Plan 2021**

- Section 4 - Choosing the Pathways which Create the Least Burden and Offer the Most Opportunity for Ireland.

In the power generation sector, increasing onshore and offshore wind capacity are the most economical options from the MACC for electricity production.

**Wind Energy Development Guidelines 2006**

- Section 5.6 discusses noise impacts, which should be assessed by reference to the nature and character of noise sensitive locations i.e. any occupied house, hostel, health building or place of worship and may include areas of particular scenic quality or special recreational importance. In general noise is unlikely to be a significant problem where the distance from the nearest noise sensitive property is more than 500m.
- Section 5.12 notes that careful site selection, design and planning and good use of relevant software can help to reduce the possibility of shadow flicker in the first instance. It is recommended in that shadow flicker at neighbouring

offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day. The potential for shadow flicker is very low at distances greater than 10 rotor diameters from a turbine.

- Chapter 6 relates to aesthetic considerations in siting and design. Regard should be had to profile, numbers, spacing and visual impact and the landscape character. Account should be taken of inter-visibility of sites and the cumulative impact of developments.

**Draft Wind Energy Development Guidelines 2019**

- Chapter 5 – considering an application for wind energy development.
    - A planning authority may consider some if not all of the following matters:
        - Environmental assessments (EIA, AA etc.)
        - Community engagement and participation aspects of the proposal
        - Grid Connection details
        - Geology and ground conditions, including peat stability; and management plans to deal with any potential material impact. Reference should be made to the National Landslide Susceptibility Map to confirm ground conditions are suitable stable for project;
        - Site drainage and hydrological effects, such as water supply and quality and watercourse crossings; Site drainage considerations for access roads/tracks, separate in addition to the impact of the actual turbines management plans to deal with any potential material impact on watercourses; the hydrological table; flood risk including mitigation measures;
        - Landscape and visual impact assessment, including the size, scale and layout and the degree to which the wind energy project is visible over certain areas and in certain views;
        - Visual impact of ancillary development, such as grid connection and access roads;

- Potential impact of the project on natural heritage, to include direct and indirect effects on protected sites or species, on habitats of ecological sensitivity and biodiversity value and where necessary, management plans to deal with the satisfactory co-existence of the wind energy development and the particular species/habitat identified;
- Potential impact of the project on the built heritage including archaeological and architectural heritage;
- It is recommended that consideration of carbon emissions balance is demonstrated when the development of wind energy developments requires peat extraction.
- Local environmental impacts including noise, shadow flicker, electromagnetic interference, etc.;
- Adequacy of local access road network to facilitate construction of the project and transportation of large machinery and turbine parts to site, including a traffic management plan;
- Information on any cumulative effects due to other projects, including effects on natural heritage and visual effects;
- Information on the location of quarries to be used or borrow pits proposed during the construction phase and associated remedial works thereafter;
- Disposal or elimination of waste/surplus material from construction/site clearance, particularly significant for peatland sites; and
- Decommissioning considerations.

Notable changes within the draft guidelines relate to community engagement, noise and separation distance.

**Noise**

- Section 5.7.4 - The “preferred draft approach”, proposes noise restriction limits consistent with World Health Organisation Guidelines, proposing a relative rated noise limit of 5dB(A) above existing background noise within the range of 35 to 43dB(A), with 43dB(A) being the maximum noise limit permitted, day

or night. The noise limits will apply to outdoor locations at any residential or noise sensitive properties.

**Shadow Flicker**

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

**Community Investment**

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

**Visual Impact**

- Section 6.4- Siting of Wind energy projects.

**Set back**

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

the noise requirements of these Guidelines must be capable of being complied with in all cases

**Guidelines for Assessment of Ecological Impacts of National Roads Schemes, NRA, 2009**

- Section 3.3.1 Geographic context for determining value

### 5.2. Natural Heritage Designations

- River Barrow and River Nore SAC is located c. 600 metres to the west of the proposed development, a tributary of the River Barrow flows through the site and another to the east.
- Slieve Bloom SPA is located c. 4.7km to the southeast of the development site.

### 5.3. EIA Screening

5.4. Schedule 5 of the Planning and Development Regulations, 2001 (as amended) transposes Annex I and II of the EIA Directive and sets out prescribed classes of development, for which an environmental impact assessment is required. The following classes are noted:

5.5. Part 2 (3)(i) Installations for the harnessing of wind power for energy production (wind farms) with more than 5 turbines or having a total output greater than 5 megawatts.

5.6. An EIAR has been submitted by the applicant and is examined hereunder.

## 6.0 The Appeal

### 6.1. First Party Grounds of Appeal

The first party grounds of appeal have been prepared by Fehily Timoney on behalf of the applicant and can be summarised hereunder:

- The site is within an area identified by Laois County Council as being suitable for wind, if the current proposal does not proceed, Laois County Council will be signficantly deficient in their contribution to onshore renewal energy targets.

- Reference is made to EU, national, regional, and local policy in relation to climate change and wind energy.
- Laois , compared to other counties falls short in its designations for wind energy development.
- The potential impact on bats has been clearly demonstrated in the submitted documentation with the application. The impact to bat populations is considered to be slight to imperceptible residual negative effect with the mitigation measures implemented, there is therefore no reason why the proposed development cannot proceed.
- Reference is made to Moanvane Wind Farm Project ABP 301619 and Pinewood Wind Farm Project 248518 in which national need was balanced against the local impacts.
- In relation to Bats the Board is referred to Section 3 of the Dernacart Wind Farm Bat Survey 2020 and the response to the further information request submitted to Laois County Council on 2nd June 2020.
- All bat detector units were micro sited with the exception of turbine no.1
- A worse case scenario was adopted in terms of bat detectors.
- Two studies are referred to in relation to Bat activity in which findings suggest that bats prefer linear habitat such as trees and hedgerows rather than open agriculture habitats.
- Proposed turbines are not located along linear features.
- Mitigation measures to reduce the magnitude of effects to bats are not taken into account by the Council within their decision.
- Mitigation measures are outlined in section 3.4 of the Grounds of Appeal.
- Data was provided in line with the SNH 2019 guideline requirements and details of the methodology are outlined.
- The proposed locations of turbines have been chosen to avoid impacts to biodiversity and to avoid areas of moderate activity.
- Incorrect species referred to in planners report.

**Third Party Grounds of Appeal**

**Mountmellick Wind Turbine Impact**

A third-party appeal has been submitted by Mountmellick Wind Turbine Impact group. The grounds of appeal have been prepared by Kieran Cummins on behalf of the group and can be summarised as follows:

- It is contended that there would be additional impacts in addition to those stated in relation to bats within the reason for refusal.
- Responses to further information did not address the further information request in full.
- Proposal should have been refused in relation to recreation, tourism, H&S and infrasound, landscape and visual, biodiversity, archaeology, architecture and cultural heritage, landscape character assessment, legal issues, drainage and wells, distribution to utilities, devaluation, the proposal and sustainability.
- Concerns are raised in relation to the legal title of the lands and lack of consent from landowners.
- Mention of grid connection is included throughout the EIAR, this has not been consented and it is queried therefore how it is being considered within the EIAR.
- There are concerns regarding project slicing.
- Previous application refused by ABP for 47 turbines around Kildare and meath. The developer appears to be getting smaller permissions to build back up to the 47.
- The development is contrary to SEA directive. There should be a plan and then a project, the applicant has failed to provide a plan.
- Applicant is seeking to enquire about additional sites, thus further ignoring the SEA Directive.
- SEA is required for all plans and programmes, no such steps have been taken by the developer.
- Reference is made to case law regarding windfarms in relation to Article 6 of the Habitats Directive.

- Reference to impacts of noise on health of residents and associated caselaw and settlement awards in this regard.
- Windfarms are not sustainable in the absence of grant aid.
- Deepbore geothermal energy is more sustainable.
- EIAR prepared by the developer is a self-serving exercise.
- Reference to Derrybrien Windfarm is not included in EIAR.
- Short term economic benefit does not outweigh long term impact on natural resources.
- Assertions in relation to the principle of development are not accepted.
- All alternatives have not been considered.
- Assertions in relation to operational employees are not considered to be correct.
- River Barrow not tributaries flows through the site.
- Objection to separation distances in guidelines.
- 10 yr permission is excessive.
- Excessive quantum of aggregates to be used.
- Concerns regarding legality of felling trees planted under licence.
- Recycling of metal uses excessive resources and is counterproductive.
- Leaving foundations in situ after decommissioning is not acceptable.
- Turbine blades can not be reused and end up in landfill.
- Community liaison officer distributed information and did not liaise.
- Dissatisfaction with proposed community benefit fund.
- Concerns raised in relation to economic generation and benefits of development.
- Concerns in relation to the impact on tourism
- No consideration of infrasound in EIAR.

- Windfarms are unsafe.
- Non compliance at local quarries should be examined by the local authority to ensure material is not supplied by such operators.
- Diversion of utilities will result in unacceptable disruption.
- Shadow Flicker measures are not effective.
- Turbines will impact aviation.
- Concerns relating to predicted noise emission figures.
- Disruption from traffic will not be slight.
- Concerns raised in relation to visual impact and protected views within adjacent counties. Reference to height of turbines.
- Concerns in relation to the method of how photomontages were taken and developed. Impact is much greater than seen in the photomontages.
- Concerns in relation to the location of viewpoints.
- Concerns relating to the proximity of the development to designated sites.
- Concerns relating to the surrounding hydrological regime and impacts to groundwater in terms of pollution.
- Concerns relating to the stability of the development.
- Flood maps are out of date and there are concerns that the proposed development will exacerbate flooding in the area.
- Bats lungs explode under pressure from turbines.
- Potential for impacts to archaeology and cultural heritage.
- Potential for tourism and economic impacts, reference to development plan and local area plan policies supporting tourism and recreation.
- Reference to previous experience as being confidential in relation to the professionals involved in preparing Environmental documents.
- Proposal should be plan led not developer led.
- No quantum of aggregates is outlined.

- Reference is made to the carbon emission associated with the components of the turbine development and the unsustainable use of resources to facilitate the development of these structures.
- Turbines should be located off shore.
- Sections 147-160 refer to alternative sources of power.
- Concerns are raised in relation to enforcement.
- Applicants statements in relation to wind energy provision nationally are disputed.

**Eco Advocacy**

A second third party appeal has been received from Eco Advocacy in relation to the proposed development and is summarised as follows, it is of note that many of the grounds of appeal are similar to those raised within the grounds of appeal summarised above.

- Laois County Council have failed to consider the following:
    - Project splitting
    - Project slicing
    - SEA Directive
    - EIA Directive
    - Irish case Law
    - Sustainability
    - Biodiversity
    - Decommissioning
    - Planning/Enforcement
    - Machinery Directive
- Reference is made to the energy matrix and copies of this for random dates are included, concerns are also raised in relation to the impacts of data centres and lithium batteries.
- Impact windfarms have on resources

- Separation distance in guidelines is out of date given height of turbines, should be increased to 1,500 metres.
- 10 times the height rule should be included in guidelines.
- Concerns are raised in relation to the sustainability of the development.
- It is contended that the applicant failed to adequately consider alternatives.
- Other issues outlined are similar to those within the above grounds of appeal and will not be repeated hereunder.

### 6.2. Applicant Response

Fehily Timoney has prepared a response to the third-party grounds of appeal the issues raised are summarised as follows:

- The Planning Authority has supported the development save for a single reason for refusal in relation to bats. Which has been comprehensively dealt with in the first party appeal.
- In response to the third-party appellant's contentions that significant issues were not considered by the planning authority, the applicant refers to both sections within the planning documentation and that submitted with the further information response in which such items are examined.

### 6.3. Planning Authority Response

Laois County Council have responded to the appeal which is summarised as follows:

- The PA duly considered all aspects of the development including EIAR and NIS and all submissions.
- The PA is satisfied with the extent of the reason for refusal.
- PA do not accept liability for third party costs.

### 6.4. Observations

- None

## 6.5. Further Responses

Mountmellick Wind Turbine Impact group submitted a response to the first party appeal and the second third party appeal which can be summarised as follows:

- The appeal submitted by Eco Advocacy demonstrates how unreliable wind energy is.
- Reference to deep bore holes is welcomed.
- Concerns in relation to the methodology of bat surveys.
- Concerns relating to impacts to Leisler bats.
- Felling distance is too short, it is recommended to be 200 metres.
- Concerns raised in relation to the monitoring of bat mortality rates.
- Photomontages are not representative of the situation locally.
- Local residents have children with ASD and special needs and there are concerns in relation to the potential impact the development may have on these children in terms of infrasound and visual disturbance.
- Reference is made to studies relating to the impacts of infrasound on humans.
- Flooding.
- Impact to domestic wells.

Eco Advocacy have also submitted a response to the Mountmellick Wind Turbine Impact Group and the first party appeal, the issues raised can be summarised as follows:

- Reference is made to deep bore geo-thermal energy as a more sustainable and reliable form of energy.
- Visual impacts
- Unsustainable use of resources.
- Reference is made to a number of court judgements that relate to wind farm developments.

## 7.0 **Assessment**

7.1. This is both a first party and third party appeal against the Councils decision to refuse permission for the proposed development for reasons relating to the protection of Bats. I have reviewed the third party appeals in which there are concerns raised in relation to a significant number of issues. In the interest of clarity I will address such concerns under the relevant headings of the following assessment it is important to note at this juncture that many of the issues raised naturally fall within the headings of the EIAR and Appropriate Assessment. In the interest of conciseness I will examine such issues within these sections of the report and will not repeat under the general planning assessment. In addition, third party submissions will be dealt with on a themed basis rather than referring repeatedly to the individual appellants. The issues raised within the grounds of appeal and subsequent responses are outlined above for ease of reference. I note that the issues raised within the responses received are largely similar to those raised within the grounds of appeal.

7.2. The following assessment will examine the grounds of appeal as outlined within the first and third party appeals, having considered the information submitted with the application and the further information pertaining to same, I am satisfied that no new issues arise and the consideration of the development will pertain solely to the issues raised within the grounds of both the first and third party appeals.

7.3. The issues for consideration before the Board are summarised as follows:

- First Party Appeal – impacts relating to the protection of bats.
- Third Party Appeal - which includes the following:
    - Principle of the development
    - Impact on residential amenity in terms of noise and shadow flicker.
    - Appropriate Assessment
    - EIAR

**First Party Appeal**

7.4. It is contended by the applicant that the proposed development the Council erred in the reason for refusal in relation to bats. It is stated that adequate mitigation has been proposed in relation to the protection of bats which demonstrates that the impact to bats arising from the development would not be significant.

7.5. I note that the Council sought independent advice in relation to the potential for impacts to arise in relation to bats, and I note from this advice, which is included within the planner's further information report, that concerns were raised in relation to the effectiveness of mitigation measures proposed. Having regard to the planners report, it appears that the central argument and concern is that mitigation measures seek to reduce fatalities and do not seek to eliminate fatalities. It is therefore contended by the Council that the introduction of fatal impacts to bats is impermissible under the Irish Wildlife Act. Specially Section 23, subsection 7( c) and the proposed development was therefore refused on this basis.

7.6. It is important to provide clarity at this juncture in relation to the legislation cited within the planners report and to draw the Board's attention to the aforementioned Section of the Wildlife Act which reads as follows:

> 'Notwithstanding subsection (5) of this section, it shall not be an offence for a person— while constructing a road or while carrying on any archaeological operation, building operation or work of engineering construction, or while constructing or carrying on such other operation or work as may be prescribed, to kill or injure such an animal or to destroy or injure the breeding place of such an animal, or.

7.7. The Habitats Directive is transposed into Irish law by the European Communities (Natural Habitats) Regulations 1997. These Regulations substantially strengthen the protection provided by the Wildlife Acts, and in particular they remove all of the exemptions provided in Section 23(7) of the Wildlife Act insofar as they relate to Annex IV species, including all species of bats.

7.8. All bats species are listed on the First Schedule and Section 23 of the Regulations makes it an offence to:

- Deliberately capture or kill a bat
- Deliberately disturb a bat
- Damage or destroy a breeding site or resting place of a bat

7.9. It is essential that developers note that, in regard to the third bullet point above, the onus of satisfying themselves that a development will not damage or destroy a

breeding site or resting site of a bat rests with the developer, as the defence that the action was not done deliberately does not apply in this instance.

7.10. The clarification of the provisions of the legislation is important when referring to the Act further within the body of this report.

7.11. With regard to bat activity within the development site I note that the planner's report states that 6 of the proposed turbines are within areas of high activity for bats and the remaining 2 have moderate/high activity levels. It is further stated that the proposed development does not take account of the potential for fatalities to occur and the proposed mitigation does not seek to eliminate fatalities. It is largely for this reason that the Council determined to refuse permission. It is also stated within the reason for refusal that there was insufficient information submitted in relation to bat population effect calculations and no effort was made to relocate turbines as a result.

7.12. It is important to state at this juncture that I have reviewed all the documentation submitted in relation to Bats and I have considered the information submitted in the context of the Wildlife Act as outlined above and in the context of the Bat Mitigation Guidelines for Ireland, (Department of the Housing, Local Government and Heritage 2022) and the Nature Scot - Bats and onshore wind turbines - survey, assessment and mitigation, 2021.

7.13. I am satisfied that the nature, frequency and time of surveys is in accordance with that suggested within the guidelines and the applicant has carried out the bat surveys in a manner which would capture accurate data in relation to bat activity in the area. Details of all surveys and methodologies are outlined within Section 12.3.9 of the EIAR and subsequent sections within chapter 12 and are also dealt with specifically within the applicants grounds of appeal.

7.14. I note that the applicant within the grounds of appeal does not dispute the level of bat activity recorded within the surveys which were carried out within 2018 and 2019. However, the applicant seeks to explain the reason for the level of bat activity recorded. It is stated that the assessment of these findings is based on a very conservative representation of bat activity levels and is a worst case scenario in terms of the location of bat detectors and the records obtained.

7.15. It appears from the information submitted, that bat detectors could not be placed at the precise location of the proposed turbines and were instead placed as close as

possible within more sensitive areas 100 metres from the proposed turbine site. This enabled the representation of a worst-case scenario in relation to bat activity. I note the locations identified within the appeal submission and it is evident that most detectors were placed at hedgerows or treelines where bat activity would be at its highest due to their preference for linear features such as treelines and hedgerows.

7.16. I further note that it is stated within the documents submitted that the turbine locations will predominantly be within improved grassland, cutoverbog, and closed coniferous plantation and broadleaved woodland which provides suboptimal bat habitat. It is stated within the grounds of appeal that high quality habitat that is well connected to the wider landscape and likely to be used regularly by foraging and commuting bats is present in the form of plantation edges, hedgerows, treelines and the watercourses that adjoin the site and will not be effected by the proposed development.

7.17. With regard to Bat activity, I note that 2 number Bat surveys were carried out in 2018 and 2019. A number of Bat species were recorded within the area with the Common and Soprano Pipistrelle being the most common detected. The overall activity levels associated with these two species was moderate to high. Whilst Leisler bats were recorded the activity levels associated with this species was low to moderate.

7.18. Myotis and Brown long-eared bat were also recorded but considered to be of low risk in terms of collision.

7.19. Bat activity results from both 2018 and 2019 are similar with the highest bat activity recorded along edge habitats, specially at the edge of coniferous plantations. The lowest levels of activity was recorded within coniferous forest areas.

7.20. I note from section 5 of the 2019 Bat report that the potential for impacts to arise relate to both the construction and operational phases of the development. With regard to construction, I note that impacts will arise in relation to the permanent habitat loss as a result of keyhole felling of existing coniferous plantation, required to enable the construction of the proposed turbines and associated infrastructure. It is however, stated that due to the creation of edge habitat and open areas the, impacts on foraging and commuting opportunities is considered to be minimal. Suitable available habitat is present adjacent to the proposed works areas, and it is considered in the event that species are displaced there is sufficient suitable habitat available to facilitate species.

It is important to note at this juncture that bat activity in the forested areas of the site were low.

7.21. With regard to the operation of the development, I note that the rotation of turbines presents a risk to bats. However the height of the turbines is 185metres and the rotatory action of the blades is therefore higher. Bats are known not to fly at heights and it is considered unlikely that the proposed development will conflict with bat flight activity. Nonetheless, it is proposed to create a buffer between the conifer plantation and the turbines which will create an new edge effect for bats to forage and commute along at a safe distance from the proposed turbines. The applicants propose a distance of 95-99 metres from the turbines. It is mentioned that guidance within the UK suggests a buffer of 200 metres, however there is no substantive evidence that this is necessary.

7.22. Thus, having regard to the issues raised within the reason for refusal and based on the information submitted with both the application and appeal, I am satisfied that the proposed development would not give rise to significant effects to bat populations and that the mitigation measures proposed in terms of set backs from turbines will adequately prevent bat collisions. Notwithstanding that such measures are deemed to be acceptable, I consider it prudent to monitor the situation with monthly site inspections in order to monitor the effectiveness of the setbacks, such measures can be adequately controlled by condition should the Board be minded to grant permission. In the event that bat mortality rates are found to be increased by the proposed development it will be recommended that the affected turbines are ceased until setbacks are increased to a level agreed with the Local Authority.

7.23. **Third Party Appeal**

**Principle of development**

A seen from the policy provisions outlined above, it is clear that there is a positive presumption in favour of renewable energy projects at National, Regional and Local levels. This is reflected in the Wind Energy Development Guidelines for Planning Authorities, 2006, the Eastern and Midland Regional Assembly RSES 2020 and the Laois County Development Plan 2021-2027. Whist I note that the current Development Plan has an overriding objective to encourage and to favourably consider proposals for renewable energy developments and ancillary facilities in order

to meet national, regional and County renewable energy targets, of particular relevance to the proposed development is the identification of the proposed development site within an area in which wind development is open for consideration. It is stated within section 5 of the Wind Energy Strategy contained within Appendix 5 of the County Development Plan that such areas will be treated on their merits with the onus on the applicant to demonstrate why the development should be granted permission.

7.24. I note from the third party submissions that reference is made in relation to the sustainability of turbines and that such infrastructure is not commercially viable in the absence of grant aid. Whilst I acknowledge the concerns of the appellants in this regard, the financial viability of the development is not a matter that the board can adjudicate on and as such the principle of development is based on the national, regional and local policy positions as outlined within the relevant plans refereed to within section 5 above.

7.25. Thus, having regard to the overriding policy provisions at a national and regional level and the specific wind related local policies which apply specifically to the area within the proposed development site, it is clear that the principle of the proposed development is accepted, however, as mentioned impacts on the environment and the amenities of the area and local residents will require examination in order to determine the overall suitability of the proposed development. It is important to note at this juncture that Laois County Council did not raise concerns in relation to the acceptability of the proposed development in principle, environmentally or with regard to the visual and residential amenity of the area and raised only one concern as outlined above in relation bats, none the less given the multitude of issues raised within the third party appeal all such issues will be examined hereunder.

7.26. It is of note that the appellant has raised concerns in relation to landownership. This is largely a legal matter and is not one that the Board can finally determine. Section 34 (13) of the Planning and Development Act, states that the granting of permission does not entitle a person to carry out development and covers the eventuality that the development cannot be implemented for legal reasons. I refer the Board to Appendix 4.1 in which landowner consents and pertaining lands are clearly outlined. I am satisfied based on the information submitted that the applicant has adequately demonstrated consent in relation to the submission of the application.

7.27. With regard to the devaluation of property, there is no clear evidence to suggest that a windfarm development removed, in terms of proximity to the degree to which the proposed development is from surrounding property, would impact the value of property in its vicinity.

**Residential Amenity and Shadow Flicker**

7.28. Concerns have been raised within the third party appeals with regard to the potential for impacts to arise in relation to residential amenities, it is considered that such impacts relate to issues such as noise disturbance, traffic generation, dust pollution, visual impacts and shadow flicker. It is important to note that examination of noise, traffic, visual and dust will be examined in detail within the EIAR hereunder and will not be repeated hereunder.

7.29. With regard to shadow flicker, I note that the Wind Energy guidelines 2006, recommend that shadow flicker at neighbouring offices and dwellings within 500m should not exceed 30 hours per year or 30 minutes per day. It is stated within Section 7.3 of the EIAR submitted that there are no receptors within 500m of the proposed development, the scope of the assessment extends to 10 rotor diameters and includes 109 properties with a total of 98 being identified as dwellings or commercial premises. All properties are identified on fig 7.1 contained within the EIAR. I note that there is a potential for shadow flicker to occur at 78 of the 98 properties identified.

7.30. The results of the model show that shadow flicker thresholds may potentially be exceeded at 59 receptors. Conservative results indicate that annual shadow flicker levels will potentially be exceeded by 9.9 hours and for 53.5 minutes a day. This is the theoretical worst case scenario.

7.31. However, I note that the model cannot account for interruptions in the landscape such as tree cover and as such in reality, the incidents of shadow flicker could be lower

7.32. It is proposed to stop turbines during times of shadow flicker peaks. The applicant states within the EIAR that they are committed to zero shadow flicker at all receptors.

7.33. Thus, whilst I note the third party appellants concerns in this regard, I am satisfied based on the information submitted that shadow flicker can be adequately mitigated and will not significantly impact properties in the vicinity.

## Appropriate Assessment

7.34. The NIS dated December 2019 has been prepared by Fehily Timoney on behalf of the applicant. The NIS describes the proposed development, its receiving environment and relevant European Sites in the zone of influence of the development. It was informed by a desk top study, maps and ecological and water quality data from a range of sources and site surveys, including bird surveys which comprised of a total of 4 site visits between mid-April and early-July 2018 and mid-April and early-July 2019. Wader surveys which comprised three visits in total per breeding season i.e. between early April and late June 2018, and early April and late June 2019. Secondary species for the breeding wader surveys were common sandpiper, curlew, lapwing, redshank, ringed plover and snipe. The surveys spanned dusk to target the activity of woodcock.

7.35. With regard to Hen Harrier roost checks were undertaken in an area of cut away bog due to local anecdotical evidence. Fixed-point watches were undertaken at dusk to target potential roosting hen harriers. The survey comprised three visits undertaken at regular intervals (monthly) between October and December. All raptor observations were recorded on field maps.

7.36. A targeted mammal survey was undertaken on the 12th November and 13th November 2019, trail cameras were deployed within the study area during habitat/general ecology surveys between 16th July and 15th August 2019, and during the targeted mammal survey between 12$^{th}$ and 13th November 2019.

7.37. Two years of bat surveys have been completed within the site during the years 2018 and 2019. The surveys encompassed habitat and preliminary roost assessments, emergence surveys, activity surveys (transects) and static detector surveys.

7.38. An electrical fishing survey was undertaken at the 11 sites during September 2019.

7.39. The report concluded that, taking into account the project design and the implementation of mitigation measures identified in the NIS, the proposed development will not result in adverse effects on the integrity of any Natura 2000 site.

7.40. Having reviewed the NIS, the supporting documentation and the further information submitted, I am generally satisfied that it provides adequate information in respect of the baseline conditions, identifies the potential impacts, uses best scientific information and knowledge and provides details of mitigation measures. I am satisfied, that the

information provided is generally sufficient to allow for appropriate assessment of the development.

**Stage 1 Screening**

7.41. Notwithstanding the submission of a NIS, it is prudent to review the screening process to ensure alignment with the sites brought forward for AA and to ensure that all sites that may be affected by the development have been considered.

7.42. Having regard to the information and submissions available, nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and sensitivities of the ecological receptors, I consider the following European Sites are relevant to include for the purposes of initial screening for the requirement for Stage 2 appropriate assessment on the basis of likely significant effects**.**

**Table 1.0**

| **European Site**<br>**Name & Code** | **Distance** | **Qualifying Interest** | **Source-pathway-receptor** | **Considered further in screening** |
|---|---|---|---|---|
| **River Barrow and Nore SAC**<br>**(Site code: 002162)** | **c. 0.6km to south west of site, (2.2km instream distance)** | Estuaries [1130]<br>Mudflats and sandflats not covered by seawater at low tide [1140]<br>Reefs [1170]<br>Salicornia and other annuals colonising mud and sand [1310]<br>Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]<br>Mediterranean salt meadows (Juncetalia maritimi) [1410]<br>Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260] | Existing tributaries in and around site. | **Yes,** there are a number of tributaries in relation to this site within and around the boundary of this site. There is potential for impacts to arise in relation to sedimentation and pollution. |

| | | | | |
|---|---|---|---|---|
| | | European dry heaths [4030]<br><br>Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]<br><br>Petrifying springs with tufa formation (Cratoneurion) [7220]<br><br>Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]<br><br>Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]<br><br>Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016]<br><br>Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]<br><br>Austropotamobius pallipes (White-clawed Crayfish) [1092]<br><br>Petromyzon marinus (Sea Lamprey) [1095]<br><br>Lampetra planeri (Brook Lamprey) [1096]<br><br>Lampetra fluviatilis (River Lamprey) [1099]<br><br>Alosa fallax fallax (Twaite Shad) [1103]<br><br>Salmo salar (Salmon) [1106]<br><br>Lutra lutra (Otter) [1355]<br><br>Trichomanes speciosum (Killarney Fern) [1421] | | |

| | | | | |
|---|---|---|---|---|
| | | Margaritifera durrovensis (Nore Pearl Mussel) [1990] | | |
| **Slieve Bloom SPA**<br>**(Site code 004160)** | **c.4.8km south west of site.** | Hen Harrier (Circus cyaneus) [A082] | Commuting Hen Harrier may pass over the site. | **Yes,** commuting / foraging hen harrier may utilise the site. |
| **Slieve Bloom SAC**<br>**(Site code:000412)** | **c.10km south west of site.** | Northern Atlantic wet heaths with Erica tetralix [4010]<br>Blanket bogs (* if active bog) [7130]<br>Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0] | None | **No,** the site is within a different ground water catchment area and with regard to surface water the designated site upstream of the proposed development site. No meaningful pathways therefore exist. |
| **Mountmellick SAC (site code:002141)** | **4.8km from site** | Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016] | None | **No,** no pathway present |
| **Charleville Wood SAC (site code 000571)** | **14.5km** | Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]<br>Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016] | None | **No,** no pathway present |

**Screening Determination**

7.43. The Screening Report submitted screens out all Natura 2000 sites on the grounds that there is a lack of suitable habitat in the case of the Slieve Blooms SPA and that the others are removed from the development and will not be affected by disturbance with the exception of River Barrow and Nore SAC. In relation to the Slieve Blooms SPA of which Hen Harrier the single qualifying interest I note that Hen Harrier were not recorded at the site during extensive bird surveys. It is also mentioned within the EIAR that there is no suitable Hen Harrier habitat within the development site. Hen harriers

are ground nesting birds that breed in moorland, young conifer plantations and other upland habitats at elevations of between 100 and 400 metres above sea level. The proposed windfarm is between 80m od to 73m od. The core foraging range for hen harrier during the breeding season is 2km, with a maximum range of 10km (SNH, 2016). In the majority cases, the core range should be used when determining whether there is connectivity between the proposal and the qualifying interests. Maximum distances should only be used in exceptional circumstances e.g. if there is suitable habitat within the proposed development site and no other suitable foraging habitat exists outside the site. As the proposed wind farm site does not have suitable habitat, the core foraging range of 2km will be used for the assessment. Hen Harrier typically only travel 1km to source alternative nest sites (SNH, 2016). Given the absence of hen harrier recordings during the ornithological surveys and the lack of suitable habitat at the proposed wind farm site, in addition to the distance between the proposed wind farm and the SPA, it is considered that no effects will occur by virtue of disturbance or displacement on hen harrier or the Slieve Blooms SPA.

7.44. It is for this reason that the Slieve Blooms SPA was screened out. I consider the applicants approach in this regard to be reasonable and note that the Council did not raise any concerns in this regard within the assessment of the application.

7.45. I have considered the European sites as listed above and consider that the applicant's approach is reasonable. Based on my examination of the NIS report and supporting information submitted, the scale of the development, its likely effects by way of the potential to contaminate or create disturbance to qualifying interests of the River Barrow and Nore SAC (002162) by way of water pollution and sedimentation during construction, I would conclude that a Stage 2 Appropriate Assessment is required for this Natura 2000 site. It is important to note that mitigation measures have not been considered in the Appropriate Assessment Screening.

**Stage II Appropriate Assessment**

7.46. The following Appropriate Assessment of the implications of the proposed works alone and in combination with other relevant plans and projects will be carried out in relation to the following European site in view of its conservation objectives:

- River Barrow and Nore SAC (002162)

7.47. The NIS submitted on behalf of the applicant concluded that the proposal will not, beyond reasonable scientific doubt, adversely affect the integrity of any Natura 2000 designated sites either directly or indirectly.

7.48. The following is a summary of the objective scientific assessment of the implications of the project on the qualifying interest features of the European site using the best scientific knowledge in the field. All aspects of the project which could result in adverse effects are assessed and mitigation measures designed to avoid or reduce any adverse effects are considered and assessed.

7.49. Potential for direct and indirect effects

7.50. As outlined within section 6.3 the potential for adverse effects relates to changes to water quality arising from pollution and sedimentation of watercourses arising at various locations and associated with various operations during the construction of the development.

7.51. With regard to the Zone of Influence relating to such impacts it is of note that pollution and sedimentation can have an indirect effect by way of degradation of habitats from the changes in water quality and can also indirectly affect SCIs of Natura 2000 sites by adversely affecting habitats on which SCIs rely.

**River Barrow and Nore SAC**

7.52. This site consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and it also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The site is very important for the presence of a number of E.U. Habitats Directive Annex II animal species including Freshwater Pearl Mussel (both Margaritifera margaritifera and M. m. durrovensis), White-clawed Crayfish, Salmon, Twaite Shad, three lamprey species – Sea Lamprey, Brook Lamprey and River Lamprey, the tiny whorl snail Vertigo moulinsiana and Otter. This is the only site in the world for the hard water form of the Freshwater Pearl Mussel, M. m. durrovensis, 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 Barrow/Nore is mainly a grilse fishery though spring salmon fishing is good in the vicinity of Thomastown and Inistioge on the Nore. The upper stretches of the Barrow and Nore, particularly the Owenass River, are very important for spawning.

7.53. Overall, 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 I and II of the E.U. Habitats Directive. Furthermore it is of high conservation value for the populations of bird species that use it. The occurrence of several Red Data Book plant species including three rare plants in the salt meadows and the population of the hard water form of the Freshwater Pearl Mussel, which is limited to a 10 km stretch of the Nore, add further interest to this site.

Potential impacts relate to a deterioration in water quality as a result of sediment laden surface water runoff and pollution from construction activities.

**Potential in-combination effects**

7.54. In combination effects are examined within page 51 of the NIS submitted. The proposed works were considered in combination with impacts arising from forestry, habitat alteration and fragmentation, peat harvesting and other development and windfarms in the area within a 20km radius.

7.55. In-combination effects have also been considered in the context of industry and businesses operating within the wider area in relation to climate change and the potential for waste water emitters to impact water quality within rivers.

7.56. The NIS submitted for the proposed project concludes, having considered the aforementioned activities and development that subject to mitigation measures relating to the protection of water quality, no significant in-combination effects are identified with the proposed development.

**Mitigation**

7.57. Mitigation measures have been set out within Section 6.5.1 and table 6-3 of the NIS submitted and are extensive in number, it is important to note that not all mitigation proposed will be listed hereunder, however I have examined all mitigation proposed and considered such measures in relation to the potential impacts arising from the proposed development.

7.58. With regard to surface water effects, I note that a surface water run-off drainage system will be constructed at each of the turbine locations and along the new sections of road, to separate and collect ‘dirty water’ run-off from the turbines and road and to intercept clean over land surface water flows from crossing internal roadways. Drains

carrying construction site runoff will be diverted into settlement ponds that reduce flow velocities, allowing silt to settle, thereby reducing the sediment loading.

7.59. Settlement ponds will require regular inspection and cleaning when necessary. This will be carried out under low or zero flow conditions so as not to contaminate the clean effluent from the pond. Where necessary, check dams, sandbags, silt fences will be installed in adjacent drainage roadside drainage ditches to ensure optimum standard of water running into adjacent streams from the roadside drainage. During periods of heavy precipitation and run-off, works will be halted or working surfaces/pads will be provided to minimise soil disturbance. Surface water will be inspected daily.

7.60. Mitigation measures in relation to excavated material include the prevention of stockpiling of materials and the reuse of materials within the site. Excess/unsuitable material will be removed from site. Appropriate siltation measures will be put in place prior to excavations. Stockpiles will be temporarily stored a minimum of 50m back from rivers/streams on level ground with a silt barrier installed at the base.

7.61. For all grid connection trenching along the local road, any unsuitable backfill material excavated will be immediately taken away from the works area in trucks and disposed of under licence.

7.62. With regard to dewatering, ground water/surface water will not be pumped directly into roadside drains/watercourses, such water which has become silted within the turbine foundations will be pumped to the surface water drainage system. Where this is not feasible, temporary storage will be provided within the excavations and dewatering carried out at a flow rate that is within the capacity of the settlement ponds.

7.63. A suitably qualified and experienced project ecologist will be employed during the construction phase of the project. Duties will include the review of all method statements, delivery of toolbox talks and monitoring of construction phase to ensure all environmental controls and mitigation is implemented in full.

7.64. Prior to being brought onto the site, all plant and equipment will be cleaned and free of soil/mud/debris or any attached plant or animal material.

7.65. Forestry felling and vegetation clearance will be undertaken outside of the bird breeding period, March to August, inclusive. If there is any remaining clearance during

that period, it will only be completed following survey by the ECoW to confirm nesting birds are absent from the area to be cleared/felled.

7.66. With regard to concrete, washout of concrete trucks will occur off-site at a designated, contained impermeable area at supplier's depot. No disposal of concrete remnants will be permitted on site.

7.67. Mitigation in relation to temporary construction compounds and refuelling includes the diversion of surface water to an oil interceptor to prevent pollution, the use of a bunded containment area within the compound for the storage of fuels, lubricants, oils etc, the use of 110% capacity double bunded mobile bowsers, plant nappies or absorbent mats, long term storage of wastes and oils will not be permitted on site.

7.68. All mitigation measures will be examined in relation to the potential for likely significant effects on the aforementioned Natura 2000 sites within the following integrity test.

7.69. **The integrity Test**

7.70. I have considered the NIS along with the information submitted with the application and have had regard to the mitigation measures outlined. Potential for impacts to arise in relation to the leakage of oils and diesels or other such contaminates from construction vehicles has been dealt with within the mitigation measures outlined in 6.5.1. All machinery will be checked prior to entering the works area and all fuel, lubricants and hydraulic fluids will be kept in a secure bunded area removed from watercourses with a buffer of 50m from streams.

7.71. Stream crossings will be using clear span pre-cast concrete culvert crossings such as a bottomless arch or bottomless box culvert. The design of a clear span pre-cast concrete culvert crossing will ensure that the existing stream/river bank is maintained during the construction phase, which will avoid the need for in-stream works. This design will ensure that the existing channel profile within each watercourse is maintained and gradients within the watercourse are not altered. The existing hydrological regime of each watercourse will be maintained.

7.72. These mitigation measures are standard in nature and are known to be effective. I am therefore satisfied that the mitigation measures outlined in relation to hydrocarbon contamination of soils and waters are acceptable and will prevent impacts from such sources to the designated site listed above.

7.73. On the basis of the information provided with the application, including the Natura Impact Statement, and in light of the assessment carried out, I am satisfied that the proposed development individually, or in combination with other plans or projects would not be likely to have a significant effect on European site No. (002162) in view of this site's Conservation Objectives.

**Table 2 AA summary matrix – River Barrow and Nore SAC**

| **Rier Barrow and Nore SAC, site code: (002162)**<br><br>**Summary of likely significant effects**<br>• **Habitat Loss**<br>• **Disturbance**<br>**Conservation Objectives: To maintain or restore the favourable conservation status of habitats and species of community interest** | | | | | |
|---|---|---|---|---|---|
| | | **Summary of Appropriate Assessment** | | | |
| **Qualifying Interest feature** | **Conservation Objectives** | **Potential adverse effects** | **Mitigation measures** | **In-combination effects** | **Can adverse effects on integrity be excluded?** |
| Estuaries [1130]<br><br>Mudflats and sandflats not covered by seawater at low tide [1140]<br><br>Reefs [1170]<br><br>Salicornia and other annuals colonising mud and sand [1310]<br><br>Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]<br><br>Mediterranean salt meadows (Juncetalia maritimi) [1410]<br><br>Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho- | To maintain favourable conditions. | Habitat loss, displacement and disturbance. | Surface water management plan, installation of construction buffers and pollution and sediment control measures | Additional development in area including grid connection | Yes |

| | | | | | |
|---|---|---|---|---|---|
| Batrachion vegetation [3260]<br><br>European dry heaths [4030]<br><br>Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430]<br><br>Petrifying springs with tufa formation (Cratoneurion) [7220]<br><br>Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]<br><br>Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae) [91E0]<br><br>Vertigo moulinsiana (Desmoulin's Whorl Snail) [1016]<br><br>Margaritifera margaritifera (Freshwater Pearl Mussel) [1029]<br><br>Austropotamobius pallipes (White-clawed Crayfish) [1092]<br><br>Petromyzon marinus (Sea Lamprey) [1095]<br><br>Lampetra planeri (Brook Lamprey) [1096]<br><br>Lampetra fluviatilis (River Lamprey) [1099] | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Alosa fallax fallax (Twaite Shad) [1103]<br><br>Salmo salar (Salmon) [1106]<br><br>Lutra lutra (Otter) [1355]<br><br>Trichomanes speciosum (Killarney Fern) [1421]<br><br>Margaritifera durrovensis (Nore Pearl Mussel) [1990] | | | | | |
| **Overall conclusion: Integrity test**<br><br>Following the implementation of mitigation, the construction and operation of this proposed development will not adversely affect the integrity of this European site. | | | | | |

7.74. **Conclusion**

7.75. In overall conclusion, having regard to the foregoing assessment, I consider, based on the information submitted, that the proposed development, in terms of the principle of development, the likelihood of significant environmental effects and the likelihood of significant adverse effects with regard to European designated sites is acceptable subject to conditions set out hereunder. As is outlined above, the potential for adverse impacts has been adequately mitigated for and no significant residual impacts remain.

7.76. The provision of a secure and reliable energy supply within Ireland is essential to the country's economic growth and the prosperity of the population and this is supported in policy at a European, national, regional and local level within the Laois County Development Plan. The proposed development is an essential infrastructure project located in an area identified as a Strategic Area for wind, which will assist in Irelands move to a low carbon economy and is in accordance with the sustainable development of the country.

## 8.0 Environmental Impact Assessment

8.1. The application is accompanied by an Environmental Impact Assessment Report (EIAR) which was prepared by Fehily Timoney on behalf of the applicant. This EIA section of the report should, where appropriate, be read in conjunction with the relevant parts of the Planning Assessment above.

8.2. The application falls within the scope of the amending 2014 EIA Directive (Directive 2014/52/EU) on the basis that the application was lodged after the last date for transposition in May 2017. The application also falls within the scope of the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018, as the application was lodged after these regulations come into effect on 1st September 2018.

8.3. The impact of the proposed development is addressed under all relevant headings with respect to the environmental factors listed in Article 3(1) of the 2014 EIA Directive. The EIAR sets out a case regarding the need for the development (Chapter 2). The EIAR provides detail with regard to the consideration of alternatives in Chapter 2. An overview of the main interactions is provided at Chapter 17. Details of the consultation entered into by the applicant with Laois County Council and other prescribed bodies as part of the preparation of the project are also set out in the application documentation.

8.4. Article 3 (2) of the Directive requires the consideration of the effects deriving from the vulnerability of the project to risks of major accidents and / or disasters that are relevant to the project concerned. The potential for 'unplanned events' is addressed within the relevant sections of the EIAR.

8.5. The potential for 'flooding' is considered in Section 14 Hydrology and Water Quality. I consider that the requirement to consider these factors under Article 3(2) is met.

8.6. In terms of the content and scope of the EIAR, the information contained in the EIAR generally complies with article 94 of the Planning and Development Regulations 2001, as amended, all studies informing the EIAR are up to date and recently acquired. Additional pre-construction surveys will be required in order to provide up to date information in relation to invasive species, mammals, bats and birds, however such issues can be adequately dealt with by condition.

8.7. It is important to note at the outset that the proposed development under consideration within this application does not cross international boundaries and as such the need to consider transboundary effects does not arise.

**Alternatives**

8.8. The consideration of alternatives is outlined within Section 2 of the EIAR submitted and includes the consideration of alternatives in relation to site selection, alternative designs, alternative processes and a do-nothing scenario. Sites were discounted under a number of criteria such as being within European designated sites, national parks or having existing wind development. In selecting sites the applicant reviewed relevant Development Plan and Renewable Energy Strategy provisions for these potential sites. Sensitivity in terms of visual impacts, proximity to residential areas, scenic areas, accessibility and wind speeds were additional criteria utilised to define the site location.

8.9. As part of the site selection process, it was necessary to also consider the potential for grid connection, including in terms of distance to potential connection nodes and the grid capacity at the nodes, in the local area, to accommodate the connection.

8.10. This resulted in a short list of viable alternatives. Due to the subject site's high score on viability, combined with a lack of environmental sensitivities at a macro and micro level and availability of appropriate land, the developer chose the proposed site to take forward.

8.11. In terms of the alternative design, it is stated within Section 2.3.5 of the EIAR that the EIA process involved the completion of all baseline studies to generate environmental constraints that informed the design for the optimum wind farm layout. It is further stated that the design process is an iterative process, resulting in the assessment of numerous design iterations (or revised designs) to ensure the identified environmental and engineering constraints are applied to successive layout designs. Table 2.2 of the EIAR outlines the physical and environmental sensitivities and resultant design constraints of the proposed development. It is stated that over 10 no. alternative design options were considered during the project design stage. The original layout provided for a 16 turbine development which has been reduced through the design process to a total of 8.

8.12. Whilst I note the concerns raised within the third party appeal in relation to alternatives considered I am satisfied based on the information submitted that the proposed project has been developed through an iterative process which sought to avoid or reduce potential environmental effects through options appraisals and evaluation whilst having regard to consultations and feedback from a range of bodies, agencies, landowners and the public.

8.13. In my opinion reasonable alternatives have been explored and the information contained in the EIAR with regard to alternatives provides an adequate justification for the site, layout, construction methodology and grid connection route chosen and is in accordance with the requirements of the 2014 EIA Directive.

**Population and Human Health**

8.14. Chapter 6 of the EIAR submitted addresses population and human health. Effects of the construction, operation and decommissioning of the wind farm development in terms of how the proposal could affect population and settlement, economic activity, employment, land use, amenities and tourism, and health and safety are addressed. The Study Area for the purpose of this assessment on Population and Human Health primarily focuses on the local receiving human environment in the vicinity of the wind farm development, including the nearby access route. These include those who reside, work, visit, or use the local road networks in the general area. The grid route is also considered where appropriate within this section of the EIAR.

8.15. With regard to the receiving environment, as outlined above the proposed windfarm development is located in a low lying rural area in which the land use is predominantly farming. The grid connection will largely follow public roads to its final destination at Bracklone substation. The nearest urban settlements to the site of the proposed wind farm are the town of Mountmellick approximately 6km to the southeast, and the town of Portlaoise approximately 17km further to the southeast.

8.16. I note from Section 6.4.1 of the EIAR that census data indicates that the area on a whole has a larger proportion than the national average of retired people and the age profile of inhabitants was also in line with this. While there are no tourist attractions pertaining specifically to the site of the proposed wind farm development, there are a number of recreational and cultural amenities in the wider area.

8.17. In term of impacts arising from the proposed development the project is unlikely to have a significant effect on population numbers of the area and there will be no loss of residential dwellings or displacement of the existing population. Overall, throughout construction, operation, and decommissioning, it is expected that the development will have a neutral impact on population numbers.

8.18. During the construction and operational phases, it is predicted that there will be positive impacts on the local economy due to direct and indirect job creation, the proposed construction duration is expected to last 18 months and will employ up to 160 people. It is also expected that the operational stage of the proposed development would bring added benefit to the local community through the provision of a community benefit fund. This fund would assist local communities to enhance and/or maintain a range of amenities and services for residents in the local towns, villages and surrounding hinterland, which in turn would help sustain existing population levels in the area.

8.19. In terms of amenities there will be no severance, loss of rights of way or public amenities during the operational phase. Therefore, whilst I acknowledge third party concerns relating to recreation I am satisfied that there will be no significant negative effects on potential recreational use.

8.20. The land-use along the grid connection comprises mainly transport, and surrounding land use is mainly agriculture and residential. The grid connection construction works will require a road opening licence and temporary traffic management measures along the grid route, including alternating one-way stop/go traffic and temporary road closures with local diversion routes. This will result in disruption to existing traffic and access for local landowners and property owners/residents in the vicinity of the route. The active construction area for the grid connection will be small, and it will be transient in nature as it moves along the route.

8.21. The grid connection construction works will therefore have a temporary moderate short-term negative impact for road users and local landowners and property owners/residents in the vicinity of the route. Once in place, the grid connection will not affect existing or further land uses.

8.22. While there is the potential for construction related hazards, serious risks to human health and safety are not envisioned. During construction and decommissioning the

site will be managed in accordance with the following safety and health regulations and guidelines which will ensure a high standard of safety both for workers on site and the general public.

8.23. Overall, it is not expected that the Project will result in significant effects resulting in the risk of major accidents and disasters, nor is the project considered vulnerable to risks of major accidents and disasters including fire.

8.24. Impacts on health and wellbeing arising from effects of the construction and operation phases of the development specifically in relation to noise, dust and soil material removal and movement operations are considered and discussed under the respective headings of the EIAR.

8.25. Residual impacts on human health and population are not anticipated provided that the proposed mitigation measures are fully implemented.

8.26. Shadow flicker has been modelled and exceedances of 3 hours in relation to flicker in excess of 30 hours per year are expected, as a result a shutdown system will be installed to prevent any adverse impacts in this regard.

8.27. I note that a warning light system is required for the safety of aircraft however, I am satisfied, given the distance of the proposed development from the nearest dwellings that significant light pollution will not arise.

8.28. Whilst I note the concerns raise by third parties in relation to the potential for the proposed development to impact persons with additional needs, I am satisfied that the applicant has considered the health impacts as far as is practicably possible within the documentation submitted.

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

**Biodiversity**

8.30. Section 12 of the submitted EIAR assesses and evaluates the potential for significant impacts on biodiversity. The impact of the proposed development on European sites is addressed in detail in Section 9 of this report. It is important to note at this juncture that the River Barrow and River Nore SAC is located c. 600 metres to the west of the proposed development, a tributary of the River Barrow flows through the site and another to the east. The site comprises a total land area of 49ha which principally consists of conifer plantation, bogland, cutover bogland, and pastures. A 15km ecology survey radius was applied to the site for the desk based studies. The study area includes all lands within the red line boundary, grid route and delivery route, as well as the adjacent habitats and downstream watercourses ecologically connected to them. The potential ZOI, encompassed the study area, and the full extent of surface water catchments, including the designated sites and Features of Interest which are hydrologically connected to the development site and gird route.

8.31. It is important to note at the outset that the risk of water pollution to other nearby European sites can be excluded due to the mitigation measures proposed and the separation distance from the proposed development site to these sites.

8.32. While the potential for effects on the qualifying interests of these sites is remote due to the level of separation in some instances and mitigation measures proposed, it is necessary to dispel any reasonable scientific doubt that may exist. The NIS Report submitted considers the potential for effects on the aforementioned SACs and SPA both individually or in combination with other plans or projects and considered that the risk of significant effects is unlikely.

8.33. I am satisfied, based on the information submitted with the file and discussed within the Appropriate Assessment section above, that the applicant has adequately demonstrated beyond reasonable scientific doubt that the proposed development would not adversely affect the integrity of these SPAs and SAC in view of these sites Conservation Objectives.

8.34. Potential impacts on biodiversity associated with the proposed development include loss of habitat and disturbance or displacement of species. It is important to note at this juncture that impacts effecting the hydrological regime of the area are examined

in section 14 of the EIAR and an assessment of the impacts on relevant habitat will be assessed in further detail under this heading below.

8.35. The assessment of impacts is supported by an ecological assessment, a desk top study was carried out and field surveys in relation to habitats were completed between 16th July and 15th August 2019 to provide comprehensive overview of the baseline ecology in the study area. In addition, I note that a detailed assessment of the vegetation composition and cover of the cutover bog and bog woodland habitats and mosaics was also undertaken.

8.36. Detailed targeted surveys were carried out for bats, habitats, mammals and invasive species and are outlined in section 12 of the EIAR.

**Habitats**

8.37. With regard to habitats recorded on site, I note that the Windfarm site encompasses a mixture of habitat types, with improved grasslands and conifer plantations dominating. Pockets of mixed broadleaved woodland are also present as are areas of degraded raised bog, bog woodland, scrub and wet grassland. All habitats are mapped on Fig 12.8.1 – 12.8.3 of the EIAR.

8.38. It is stated that the development site has been largely planted for commercial forestry and diverse flora is therefore absent.

8.39. Having reviewed the findings outlined within the EIAR submitted I note that none of the habitat types recorded within any part of the study area correspond or meet the criteria for Annex I habitat due to the quality of habitat recorded or the absence of species required to meet such criteria. I refer the Board to Section 12 of the EIAR in which all habitats recorded are outlined in detail. I further draw the Board's attention to the classification of habitats within the study area which comprise of Locally Important habitat ranging from lower to higher value.

8.40. It is important to note at this juncture that T1,3, 4, 5 and 6 are to be located within existing conifer plantations and T2, 7 and 8 are to be located within areas of improved agricultural grassland.

8.41. I note that streams present within the site include the Forest Upper River, White Hill streams, Dernacart stream and the Cottoners brook all of which flow through or around the proposed development site. It is stated that the upper reaches of the Dernacart

stream and White Hill stream are more similar to agricultural drains. The Cottoners brook at the location close to the windfarm is a tiny polluted stream with no fish present and has no potential to support fish life.

8.42. Downstream the Barrow is crossed by the grid connection at Kilnahown Bridge, no fresh water pearl mussel is present or white clawed crayfish are present at this section of the river. Q values range from 3-4 – moderate to good. This habitat is classified as locally important and of higher value.

8.43. I draw the Board's attention to a statement within the EIAR (section 12) in which it is stated that most of the streams that could be potentially affected by construction of the windfarm are very small 1st order streams which do not support significant aquatic ecosystems.

8.44. Habitats recorded along the grid connection are detailed within section 12 of the EIAR. I note that the grid connection has a total length of 16.2km and will follow existing tracks and roads for 16km. Habitats along the route include grassy verges and hedgerows, treelines, amenity grassland and buildings and artificial surfaces. All habitats are classified as locally important ranging from higher value to lower value.

8.45. In conclusion it is clear from the information submitted and surveys undertaken that there is no Annex I habitat present within the development site as habitats have been interfered with to such an extent that the quality of habitat is poor or occurs in areas whereby conditions are not suitable for such habitats to thrive beyond the current state.

8.46. Further to Section 12.6.1.4 of the EIAR I note that Giant Hogweed has been recorded within the study area but is located away from the proposed works with the nearest stand being 250 metres from the windfarm boundary.

8.47. Management measures for such invasive species are outlined in Section 12.6.1.4 of the EIAR and based on such measures such as the installation of exclusion zones, the use of appropriately qualified personnel to remove contaminated soils where required and the disposal of such soils at licenced facilities. I am satisfied based on the information provided that the proposed development will not give rise to the spread of invasive species and is therefore acceptable in this regard.

8.48. It is important to note that a pre-construction survey will be carried out prior to construction and a site-specific invasive species management plan will be prepared

based on the findings. I consider it prudent, should the Board be minded to grant permission that a condition it applied to the permission which requests the submission of such a management plan to the Local Authority prior to the commencement of development.

**Species**

8.49. The desktop survey indicated that a total of 9 protected mammal species have been historically recorded within the study area which covers 10km radius of the proposed development site. Such species include, Badger, Red Squirrel, Otter, Pygmy Shrew, Hedgehog, Fallow Deer, Irish Hare, Irish Stoat and Pine Martin. Eight species of invasive mammal have also been recorded within the area historically and are identified within Table 12-25.

8.50. Evidence of 6 mammals species was obtained within the study area. Five of the species are considered to be of least concern which one, the Red Squirrel being near threatened. A total of 9 badger setts were observed within the study area, none of which were within the development footprint.

8.51. The wildlife trail camera survey recorded pine marten, red squirrel, and deer. During targeted surveys in suitable habitat for pine martin, no breeding pine marten was recorded.

8.52. Red squirrel was recorded on a number of occasions within and outside the site boundary of the proposed development site. During targeted transect surveys in suitable habitat such as conifer plantation, no breeding sites were observed. The project site is suitable for this species, and they are known to occur in the study area.

8.53. It is concluded within the mammal report that the non-volant mammal species recorded in the study area were pine marten, badger, red squirrel, fox and rabbit. The forestry and surrounding habitats provide suitable breeding and foraging habitat for all species recorded. While not observed during surveys, it is stated that pygmy shrew, hedgehog and stoat may be using the site owing to the suitability of the habitats present however, while undertaking surveys in suitable habitats for the aforementioned species, no breeding sites such as setts, holts, dens or dreys were observed in the project footprint.

8.54. In terms of bat activity within the site it is stated within the bat surveys included within the appendices of the EIAR that common pipistrelle, Leisler's bat and soprano pipistrelle maintained a consistent presence at the site albeit at highly variable rates. The levels of activity recorded strongly suggest that the proposed development site is within the foraging range of local populations of these species.

8.55. On the basis of the numbers of vocalisations recorded, it is concluded that brown long-eared bats and species from the genus Myotis use the site somewhat sporadically. Therefore, while the site is within the extended foraging range of local populations of these species the level of use is indicative of occasional use and not consistent with those expected within the core foraging range.

8.56. The highest concentration of bat activity was recorded at T7 where the detector was placed at the edge of the conifer plantation. Overall bat activity was highest during summer months compared to the autumn season.

8.57. Kilnahown bridge was also surveyed for bat activity as it is the area along the cable route which comprises of the most suitable bat habitat, Daubenton's bat was recorded roosting during a daytime torch survey. I note that the bridge does not contain sufficient roosting spaces to accommodate a maternity colony.

8.58. It is important to note that impacts to bats species have been considered within the first party appeal above and will not be repeated hereunder, save to say that based on the detailed information submitted in relation to bat species within the application, further information response and grounds of appeal, I am satisfied that mitigation measures proposed will adequately mitigate against significant effects occurring in relation to bat populations utilising the area.

**Potential significant effects**

8.59. The construction phase of the development will give rise to potential effects including habitat loss, disturbance/displacement of species, pollution of rivers and streams draining the site and the potential to spread of invasive species.

8.60. <u>Habitats</u>

8.61. A total development area including provision of buffers will amount to 22.4ha. A total of 18.2 ha of woodland will be felled comprising of 17.32ha of conifer plantation, 0.54ha of mixed broadleaved woodland, 0.26ha of bog woodland, and 0.13ha of mixed

broadleaved/conifer plantation. Cutover bog affected amounts to 1.25ha and the magnitude of effects to this habitat is considered to be short term and imperceptible.

8.62. Section 12.5.1 of the EIAR submitted states that the design phase of the proposed project, as already mentioned, has avoided direct impact to designated sites. Hard stands have been kept to a minimum to avoid excessive direct loss of habitats and flora. It is important to note at this juncture that the proposed development site is not within the boundaries of any designated nature conservation site.

8.63. With regard to the delivery route impacts impacts will arise in relation to vegetation clearance, disturbance and displacement due to construction activities. The proposed delivery route will traverse the Royal Canal pNHA Liffey Valley pNHA and the Grand Canal pNHA. In all cases the existing roads will be used, and no modifications are required. Effects are therefore considered to be imperceptible in terms of significance.

8.64. Similarly, the proposed grid connection has the potential to give rise to river pollution at stream crossing locations, however all crossings will be via directional drilling or other non-instream methods as outlined within section 12.5.2.3 of the EIAR, the magnitude of effects arising from this element of the development is therefore considered to range between slight to imperceptible.

8.65. Further measures proposed to protect water quality include the provision of buffers between the windfarm development and streams present on site to prevent sedimentation or pollutants from entering the watercourses. Only one stream crossing is required within the windfarm site to facilitate an access road and it is proposed to improve the current culvert in place at this location with a bottomless culvert to improve water flow.

8.66. Impacts relating to replacement forestry lands identified within the application are not a matter that the Board can finally determine except with respect to the baseline existing environment and if of relevance, cumulatively. The felling and replacement of forestry is subject to the provisions of the Forestry Act and associated regulations under which there are no provisions for the Board in relation to the decision-making process.

8.67. With regard to the grid connection, noise disturbance is not considered to be significant in the context of the construction works along public roads. Terrestrial fauna utilising the habitats adjacent to the grid route are accustomed to vehicular traffic, and

agricultural activities. In addition, the hedgerows and treelines occurring along the route will not be removed to facilitate the grid route construction.

8.68. Mammals

8.69. The construction of new tracks, turbine hard standing areas, substation in addition to felling will lead to habitat loss of approximately 22.4ha, most of which, as aforementioned, is improved grassland or conifer plantation. The overall magnitude of effects to mammals are stated to be short term imperceptible. No impact is envisaged as a result of habitat loss along the turbine delivery route or the grid connection route.

8.70. As there were no breeding mammal sites within the development footprint, however it was noted within the EIAR that there was suitable habitat for red squirrel breeding and for badger with foraging habitat for other mammal species. The magnitude of unmitigated effects to mammals therefore has the potential to range from long-term significant, in the case of badgers, to short term imperceptible.

8.71. In order to prevent such effects from arising it is proposed to employ mitigation measures such as pre-construction surveys and the avoidance of felling during affected mammal breeding season. Mitigated effects are therefore not expected to be significant in terms of magnitude and I am satisfied based on the information provided within the EIAR that the proposed development will not result in significant effects to mammals within the development site and surrounds. I also note that there is an abundance of suitable habitat adjacent to the proposed development lands and as such should displacement occur it will be short term in duration.

8.72. Whilst the potential for significant effects to arise in relation to water quality will be examined in section 14 of the EIAR, it is of note that surveys have not recorded fish life in the streams within the development site. Whilst there is a connection to the River Barrow, I am satisfied that measures proposed in relation to the prevention of pollution and sedimentation will prevent any significant effects arising in relation to aquatic species.

8.73. With regard to the operational stage of the development it is stated that the main operational impacts of the proposed project will arise from the rotation of the blades of the proposed 8 wind turbines and, to a lesser extent, from occasional movement of maintenance vehicles and site personnel along access roads, and at turbine locations. Overall, I note from Section 12.7 that significant effects are not anticipated.

8.74. Operation of the development will not result in any habitat loss and impacts arising from pollution by way of fuel spillages are not expected due to the limited use of plant and machinery during this phase. With regard to bats, it is anticipated that once the construction phase ceases, any Key Ecological Receptors temporarily displaced during the construction phase are expected to utilise the habitats in the vicinity of the proposed works, shortly after the construction phase ceases. During the operational phase, there may be some slight disturbance owing to noise and human activity arising from periodic maintenance. With regard to the potential for collisions with bat species I note that most bats do not migrate at high altitude and rarely fly at heights that intersect with the blades. However, mitigation in the form of feathering blades and curtailment with an intensive bat activity monitoring programme over the first three years of the operational phase is proposed to ensure that fatalities do not arise. Vegetative buffer zones will be implemented and maintained to ensure that edge habitat is set back from turbines and does not endanger foraging or commuting bats and therefore reduces the risk of barotrauma. Lighting will be directional and overspill will be prevented. Residual impacts to bats are expected to be of a magnitude of slight to imperceptible.

8.75. Impacts to water quality and aquatic species arising from the operational phase are expected to be imperceptible.

8.76. Effects arising from the decommissioning of the development are expected to be similar to the construction phase of the development. It is stated that at the end of its operational life of 30 years, a comprehensive reinstatement proposal, including the implementation of a programme that details the removal of all structures and landscaping, will be submitted to the Laois County Council for agreement prior to the decommissioning work.

8.77. Section 12.5.5.5 of the EIAR considers the potential for cumulative effects to occur. It is considered that cumulative effects may arise in combination with activities such as agriculture, peat harvesting and forestry. The proposed project has actively sought to avoid bog and peatland habitats by excluding them from the developable area during early constraints analysis at the site. Therefore, the potential for significant cumulative habitat loss effects with on-going land management practices will not arise.

8.78. The main potential for cumulative effects is through poor water quality impacts in-combination with the existing threats and pressures in the catchment area from sources including other developments, agriculture and forestry. However, as outlined above appropriate mitigation measures have been proposed in order to prevent such effects from arising.

Ornithology

8.79. With regard to Ornithology I note in order to establish the potential for impacts to arise in relation to birds it was necessary to establish the baseline conditions of the site and surrounds. A desktop survey was undertaken, documents and mapping are referenced in Section 12 of the EIAR. Bird surveys were undertaken in 2018 and 2019. Table 12-49 outlines all bird recorded within the study area (windfarm and cable route site) and includes reference to Golden Plover which is a Annex I species. Whilst this species was recorded with the study area, no breeding was recorded in the site or the surrounding area. Breeding territories were found in relation Kestrel, Woodcock and Buzzard. Of the birds noted within the study area the magnitude of affects are considered to range from moderate in the case of Merlin, Woodcock and kestrel and slight to imperceptible for the remaining species noted which includes, Golden Plover, Black-headed Gull, Curlew, Herring Gull, Lapwing, Peregrine, Jack Snipe, Lesser Black-headed Gull, Snipe. Sparrowhawk, Buzzard and Grey Heron.

8.80. The proposed development will give rise to disturbance during the construction phase of the development which may cause birds to vacate the territories close to the areas of works. In addition, the proposed development will result in a level of habitat loss due to the removal of forestry and open grass land.

8.81. Indirect effects may occur in relation to species linked to aquatic habitats via water pollution arising from sediment laden run off and or pollution events. The magnitude of such affects after the implementation of mitigation measures is considered to be imperceptible.

8.82. Mitigation in relation to protection of water quality has been outlined in section 14 of the EIAR and will not be repeated.

8.83. Bird species may be additionally displaced as a result of the operation of the windfarm with the rotating blades presenting a collision risk. In this regard the applicant has undertaken a collision risk assessment which is presented in table 12-53 of the EIAR,

the results of this assessment in relation to the probability of impact for all bird species recorded within the study area is extremely unlikely with the magnitude for all species expected to be negligible.

8.84. Annual mortality rates for Golden Plover, Kestrel and Lapwing are outlined in table 12-54 of the EIAR with Lapwing showing an annual national increase of 0.001%, Kestrel – 0.007% and Golden Plover – 0.0009%. These figures are not significant when reviewed in the context of general annual mortality rate for these species.

8.85. Section 12-55 of the EIAR examines the disturbance and Barrier effects created by the proposed development to bird species recorded within the area. Where there is a likelihood of displacement to feeding or roosting birds, it is stated that there is ample available habitat within the surrounding area adjacent to the proposed windfarm development. I have reviewed table 12-55 of the EIAR and based on the behaviour of species recorded within the site and the availability of suitable displacement habitat I am satisfied that the magnitude of effects in relation to the foregoing will not be significant.

8.86. Table 12-56 examines the potential for effects to arise in relation to decommissioning, no significant effects are expected in this regard.

8.87. It is of note that birds present within the vicinity of the grid connection route will be habituated to noise disturbance from passing traffic and as such no significant displacement or barrier effects are expected in relation to this element of the development.

8.88. Cumulative impacts have been considered in relation to ornithological impacts in the context of existing and permitted windfarms and other surrounding development. No significant impacts are expected to arise.

It is of note that the Slieve Bloom SPA is designated for Hen Harrier, this species was not recorded at the wind farm development site.

8.89. It is proposed to prepare a Construction and Environmental Management Plan and the employment of an environmental manager/ecological clerk of works to oversee the implementation of all mitigation measures specified within the CEMP. Additional mitigation measures include the use of bunded areas for fuel storage, interceptor drains to collect run off from tree felling activities, the carrying out of preconstruction

surveys to determine up to date site conditions in terms of invasive species, mammals, bats and habitats etc. Best practice will be adhered to should any protected species be encountered and require relocation. Invasive species will be managed or removed in accordance with the Invasive Species Management Plan. All plant and materials imported to the site will be screened for invasive species and will be thoroughly cleaned prior to leaving the site. It is important to note at this juncture that concerns are raised within the third-party submissions outlined above in relation to the spread of invasive species. I am satisfied that the mitigation measures proposed by the applicant will prevent such spreads from occurring.

8.90. The development site will be clearly demarcated to avoid encroachment of lands outside the development boundary, the use of bog mats will be employed to protect vegetation, and the use of roadside drains will prevent erosion of adjacent lands from surface water runoff. It is also proposed to install collection drains, check dams, the use of low gradient drains, buffered outfalls and settlement ponds. As mentioned above mitigation in relation to water quality will be discussed in more detail within Section 14 hereunder. Nonetheless it is important to note that mitigation proposed in this regard seeks to protect aquatic life within the rivers and streams connected to the development site.

8.91. All of the aforementioned mitigation measures are common practice and known to be effective. I am therefore satisfied that the mitigation measures proposed within the documentation provided will be effective in the mitigation of effects. I note that it is contended within the EIAR that provided all mitigation measures are implemented in full and remain effective throughout the construction operational, and decommissioning phase of the proposed project, no significant residual impacts on the Key Ecological Receptors are expected from the proposed project. Residual effects ranges from imperceptible to slight.

8.92. I have considered all of the written submissions made in relation to biodiversity and the relevant contents of the file including the EIAR. I am satisfied that the potential for impacts on biodiversity can be avoided, managed and/or mitigated by measures that form part of the proposed scheme, by the proposed mitigation measures or with suitable conditions. Potential for direct or indirect impacts on biodiversity can be ruled out. I am also satisfied that cumulative effects, in the context the proposed grid

connection and other existing and proposed development in the vicinity of the site, are not likely to arise.

**Hydrology and Water Quality**

8.93. Section 14 of the EIAR examines the potential impact of the development on hydrology and Water quality. A desk study, field mapping and a walkover survey was carried out on the 16th May 2019. The proposed windfarm is located within two sub catchments as defined by the WFD, turbines 1, 2, 3, 4, 7, & 8 are within the Barrow _SC_0110 (14_11) and turbines 5 & 6 are within the Barrow _SC_030 (14_1).

8.94. It is important to note at this juncture that the proposed development is not located within any European protected sites, however there is connectivity with the River Barrow and Nore SAC via surface watercourses. Impacts to such designated sites will be examined in detail within the Appropriate Assessment section of this report and will therefore not be repeated hereunder. The site is located downstream of the development and is connected via a number of small streams, slow flowing tributaries and field drains, it is therefore concluded by the applicant that there is no likelihood of significant effects arising from the proposed development to this designated site.

8.95. Surface water runoff from turbines 1 & 2 drain east to the Forest Upper Stream and onto the River Barrow. Turbine 3 drains to an unnamed tributary of Forest upper. Turbines 4, 5, 7, & 8 drain to White Hill and onto the River Barrow. Turbine 6 drains to Cottoners Brook stream and onto the River Barrow. Water quality is classified as moderate within the River Barrow and its tributaries at this point and are identified as being at risk. Water quality in relation to the UGC route is also identified and illustrated within Fig 14.4.2 to 14.5.3.

8.96. The delivery route was examined and will require a number of stream crossings; however, no modifications were identified as being required at these stream crossings and as such no impacts to hydrology are expected.

8.97. <u>Potential Impacts</u>

8.98. Activities associated with tree felling, new access tracks, upgrade of tracks, turbine hard standing, on site substation and other new hard surfaces all have the potential to contribute to an increase in run off. Calculations suggest that surface run off to the Barrow will increase by 0.03%. The overall run off generated by the development is

expected to be 0.387$m^3$/s or 0.12% (increase in the current situation at the site). It is expected that run off will decrease over time as vegetation recolonises disturbed areas. The overall magnitude of effects to receiving waters is expected to be negligible.

8.99. Notwithstanding that run off levels are expected to be low, surface water impacts are likely to arise as result of hydrocarbon, sediment and / or concrete release during construction or storage during operation, such impacts relate to both the wind farm site and the grid connection, and to a lesser extent to the delivery route works. Additional impacts relate to the diversion, culverting or bridging water crossings within the development boundary which can result in morphological changes, changes to drainage patterns and alteration of aquatic habitats, and surface water run off from hard stands within the site.

8.100. Whilst I note the concerns raised within the third party submissions in relation to hydrology I note that it is proposed to incorporate an appropriate drainage design into the construction of the proposed development which will be the primary mitigation measure for the development and will incorporate silt control measures and reduction in the rate of surface water run off from the proposed development.

8.101. Other mitigation measures are outlined in section 14.7 of the EIAR and include the installation of stilling ponds, silt fencing, silt traps and swales, interceptor drains, cross drains, check dams and the use of bunded areas for the storage of fuels and oils and the use of spill kits and leak proof containers. All of which are standard practice and known to be effective in the protection of water quality. I am satisfied based on the information submitted that the applicant has proposed adequate measures to prevent the deterioration of adjacent watercourses including the River Barrow.

8.102. With regard to the cable route it is proposed to divert water from entering trenches through the use of sandbags and the reinstatement of excavated material. There will be no stockpiling of material and waste material will be removed by a licenced contractor in accordance with the CEMP.

8.103. In relation to horizonal drilling it is proposed to install silt traps and monitor works, any surplus material from this process will be removed from site and a mixture of inert, natural drilling fluid will be used. Additional mitigation in relation to this process is outlined section 14.7.1.2 of the EIAR.

8.104. I further note that concerns are raised within the third party grounds of appeal in relation to the potential for impacts to arise to local wells. Ground vulnerability is classified as being 'moderate' across most of the windfarm site becoming high at the extreme east, west and south of the windfarm site. The extreme north is classed as being low. The Windfarm site is located within the Portlaoise GWB and is classified a having 'good' water quality status and is not at risk.

8.105. No karst features are present underneath the development site and there are no source protector zones within the proposed development boundary. There are 28 no. ground water wells and one spring well within 1km of the proposed windfarm site. These wells are a mixture of industrial, domestic and group schemes.

8.106. The nearest property is in excess of 500 metres from the proposed windfarm development. Given the separation distance from these properties and that no abstraction processes will be undertaken at the site it is signficantly unlikely that the proposed development would pose any threat to domestic water supplies in the area. Dewatering will only relate to turbine foundations and will occur for a limited period only.

8.107. Mitigation measures outlined above will also prevent any impacts arising from fuel or lubricant spillages affecting ground water quality.

8.108. Overall it is stated within the EIAR that subject to the implementation of mitigation measures outlined, no significant impacts on the water environment from the proposed development will occur during construction, operation, or during decommissioning phases of the wind farm, the grid connection.

8.109. Cumulative impacts have been considered in conjunction with all other existing, approved or proposed projects and given the nature of the proposed works are considered to be unlikely.

**Flood Risk**

8.110. Flood mapping has been produced by the OPW in relation to the proposed development site. The indicative flood mapping shows the southern and eastern boundary of the site is within Flood Zone A. It is stated that there is no turbine development in these areas. No historical flooding has been recorded at the windfarm

development site and there are no areas defined as benefitting lands within the windfarm site.

8.111. A flood risk assessment was prepared in relation to the proposed development in order to identify any effects to flooding downstream. Details of this assessment are discussed in Section 14.5 of the EIAR. Existing culverts have been examined and modelled in order to determine the impact of the proposed development. All stream crossings and existing related infrastructure is also examined within Section 14.5.3.1-14.5.3.5. It is of note that any additional water arising from the proposed development would have an negligible effect on these existing stream crossings.

8.112. 50 metre buffers are proposed as are drainage systems through the proposed windfarm development site. Notwithstanding that, as aforementioned, the expected surface water increases will be negligible, the proposed drainage measures will reduce the flows even further to adjacent watercourses. The proposed development therefore has a minimal impact on flooding risk in the surrounding area.

8.113. Increases in run off are not expected in relation to the grid connection route as all surfaces along the route remain unchanged. Whilst I note the third party concerns in relation to flooding I am satisfied that the proposed development will not give rising to flooding or exacerbate flooding downstream.

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

**Lands and Soils**

8.115. Section 13 of the submitted EIAR assesses and evaluates the potential for significant impacts on lands and soils and geology. Investigations undertaken by the appellant comprised desk studies of the windfarm site, the grid connection route and the surrounding study area, alongside geotechnical investigations during 2019, including

100 peat probes, 32no. hand shear vanes across the site to confirm the depth shear strength and classification of peat deposits.

8.116. According to the baseline assessment, the geology of the site comprises limestone bedrock overlain by glacial till and cutover peat with an average depth of 1.2 metres. The peat encountered was slightly to moderately decomposed with low to moderate moisture content. No areas of peat instability were noted at the site with areas of peat generally being moderately to well drained with vegetative cover.

8.117. Slope stability analysis shows that safety values across the study area are well above the minimum safety factor required for both short and long term stability. I note that the peat stability assessment was undertaken in relation to the wind farm site only and is attached in appendix 13-1 volume 3 of the EIAR. It is important to note at this juncture I have had regard to the Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments prepared by the Scottish Government in 2017, in the assessment examination of peat stability in the development site and whilst I note the concerns raised within the third party appeals in this regard, I am satisfied based on the information submitted that the applicant has adequately considered the potential for peat instability with the windfarm site.

8.118. With regard to excavation and importation of materials and aggregates I note concern are raised within the third party submission in relation to the quantum of material to be imported and exported from the development site. In this regard I note that a total of 65,000$m^3$ of aggregates will be imported into the site and a total of 67,179$m^3$ of surplus soils will be excavated. It is stated that the reuse of material will occur within the site, with 50% of excavated materials in relation to the grid connection being refilled into trenches.

8.119. Surplus material not deemed suitable for foundations will be used in landscaping and the creation of berms

8.120. Potential construction impacts relate to the mobilisation of soils through movement of peat and glacial till deposits. Peat stability has been examined above and I am satisfied that the site does not pose a significant threat to such an event.

8.121. In terms of the operational phase of the development there may be a requirement for minor excavations in the event of an infrastructure fault occurring. There is also a

potential for leaks to occur in relation to the transformer equipment within the substation element of the development.

8.122. Potential effects in relation to the decommissioning of the development will be similar to that of the construction phase.

8.123. Major accidents are considered in the context of peat slide which as aforementioned has been examined above.

8.124. Overall, the magnitude of unmitigated effects are considered to range from slight to moderate in terms of significance.

8.125. Cumulative effects are considered within section 13.4.5 of the EIAR and are considered in the context of existing and permitted development including the Mount Lucas Windfarm c. 13km northeast of the proposed development and the permitted Moanvane Windfarm c. 8km north of the proposed development. Cumulative impacts are considered to be negligible and will not be considered further in this regard.

Mitigation measures

8.126. Section 13.5 of the EIAR outlines proposed mitigation measures in relation to the proposed development, which refer to the following:

- The peat and subsoil which will be removed during the construction phase will be localised to the turbine location and access roads;
- The use of brash mats to support vehicles on soft ground.
- With regard to peat stability, it is proposed to employ a geotechnical engineer to ensure the implementation of best practice in this environment. The methodology of all civil works will be reviewed by this engineer and the monitoring posts will be the subject of a dedicated inspection on a weekly basis by the geotechnical engineer.
- The use of Settlement ponds
- With regard to the cable route, excavated material will be reused for backfilling trenches.

8.127. Mitigation measures in relation to the prevention of hydrocarbon contamination are similar to those outlined in above within the water section of this report and will not be

repeated hereunder. It is of note that an emergency plan to deal with accidental spillages will be contained within the Construction Environmental Management Plan.

8.128. All mitigation measures proposed in relation to land, and soils are common practice on such development sites and are known to be effective, I am therefore satisfied that the proposed mitigation will adequately protect the surrounding environment. I note that no significant residual effects are expected. I further note that similar mitigation is proposed in relation to the decommissioning of the development and will give rise to similar affects.

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

**Noise**

8.130. Section 8 of the EIAR submitted examines the baseline noise conditions and outlines the predicted noise levels arising from the proposed development. A full noise assessment and predictive modelling has been carried out by the applicant to inform the EIAR. Background noise values were recorded and correlated with the particular wind speed at the time. In total, 5 noise monitoring locations (NML) were selected to characterise the existing noise environment and derive the noise limit criteria for potentially impacted locations. The location of each noise monitoring station is identified within Fig 8.2 of the EIAR.

8.131. Prevailing background noise levels are outlined in table 8.5 of the EIAR. Predicted noise levels in relation to construction are outlined in table 8.7- 8.11 of the EIAR and it is of note that worst case scenario results show that noise outputs at the nearest sensitive receptor to each element of the development does not exceed the construction noise threshold as per British Standard BS 5228:2009 Noise and Vibration Control on Construction and Open Sites.

8.132. With regard to the operation of the development it is important to note that the current Wind energy Development Guidelines (2006) permit a maximum of 45dB in relation to noise emissions. The preferred draft approach as set out within Section 5.7.4 of the draft Wind Energy Development Guidelines 2019, propose noise restriction limits consistent with World Health Organisation Guidelines of 5dB(A) above existing background noise within a range of 35 to 43Db(A) with 43dB(A) being the maximum noise limit permitted day or night. These noise limitations do not exceed those permitted under the 2006 guidelines and I note that the applicant states that turbines will be shut down if required to comply with the draft 2019 guideline limitations.

8.133. Table 8.15 outlines the predicted noise levels at all noise sensitive locations. At all locations and at all wind speeds the predicted noise emissions do not exceed the derived limit criteria for both the quiet daytime and night-time periods as set out in the 2006 guidelines and in many cases noise emissions are below maximum noise limits.

8.134. Noise predictions in relation to the proposed grid connection are associated with construction only and will be carried out during restricted hours.

8.135. I note that the EIAR also refers to amplitude modulation (AM) and tonal noise which can arise from transient stalls in blade rotation. These sounds are low frequency and can travel extensive distances. With regard to AM I note that at present there is no way of predicting OAM at any particular location before turbines begin operation due to the general features of a site or the known attributes of a particular turbine. The applicant therefore states that should AM arise it will be investigated thoroughly and if a complaint is justified, the required mitigation measures will be undertaken.

8.136. Concerns are raised in relation to infrasound, there is no evidence that such frequency can be heard by the human ear and in the absence of evidence to the contrary it is not considered to present as a potential impact to residential amenity.

8.137. With regard to the proposed substation, I note that it is located approximately 700m from the nearest noise sensitive receptor. The noise level associated with the operation of the substation at the nearest noise sensitive receptor is predicted to be 35 dB(A). No significant noise impacts are therefore expected to arise in this regard as background noise will be higher than that emitted from the substation at this location. There will be no significant cumulative impact including the Wind Farm on overall noise levels at any noise sensitive receptor within the study area.

Mitigation

8.138. Section 8.7 of the EIAR outlines mitigation measures proposed in relation to noise emissions and includes the measures to reduce noise and vibration during construction, it also refers to the use of a nominated community liaison officer tasked with responding in a prompt manner to any noise and vibration complaints which may arise. Wherever possible the contractor will inform residents where appropriate of deliveries outside of normal working hours and any other works in advance.

8.139. All vehicles will be fitted with exhaust silencers and maintained in good working order to reduce noise impacts.

8.140. Significant residual impacts are not expected to arise. Cumulative noise emissions were also modelled in relation to all works on site and other windfarms within a 20km radius of the development site and are not considered to be significant in relation to any phase of the proposed development.

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

**Landscape and visual assessment**

8.142. Section 11 of the EIAR submitted examines the potential for impacts arising from the development to landscape and the visual amenity of the area. Field visits were undertaken in order to establish baseline conditions. Reference was also made to the landscape designations within the Laois Development Plan and the Landscape Character Assessment for the County. Visual mapping and baseline data which include viewpoint locations are based on a radial area of 20 kilometres. This is in accordance with the recommended area by the DOEHLG (2006) Guidelines of a 20 kilometre radius Zone of Theoretical Visibility for wind turbines of 100 metres (or more) in height, and 25 kilometres where there is a landscape of national importance. There is no landscape of national importance present.

8.143. The ZTV map indicates that the locations at which the majority of turbines would be visible. The ZTV map is a topographical tool and does not take into account buildings or vegetation. In order to properly determine the actual visibility of the turbines, 21 no. specific locations identified within the ZTV were assessed in detail. Of the 21 locations and photomontages examined within the EIAR, visual impacts for turbines were examined and the significance of effects for all ranged from medium (at three locations) to low.

8.144. The proposed development is located in a Lowland Agricultural Area and partially within a Peatland area as identified within the Laois County Development Plan, such landscapes are strikingly flat with landcover of raised bog that is mostly exhausted and being considered for wind energy, amenity or afforestation. There are no scenic routes within the area of the development site and of the protected views within the development plan only one, 'V5' that is of relevance to the proposed development, this runs from Tullamore in a south west direction until it meet Laois county border.

8.145. It is stated within the EIR that the LCAs in the surrounding area are considered in detail under section 11 of the EIAR and I note all of which were considered in detail in the preparation of the Laois County Wind Energy Strategy in which the proposed site is identified as being in an 'Open for Consideration' area for wind energy development.

8.146. It is important to note that the applicant also considered the LCAs within the Kildare County Development Plan 2017-2023 details of which are outlined in section 11.3.4.5 of the EIAR.

8.147. With regard to a change in landscape it is acknowledged that the proposed windfarm will introduce a new form of development into the landscape. However, it is also suggested that windfarms are recognised as part of the rural landscape and not and industrial form of development as generally referred to. It is further stated that beyond 2-3km turbines generally become part of the overall landscape rather than a defining feature within the landscape.

8.148. I note that there will be a high degree of intervisibility between the Slieve Blooms and the Rock of Dunamaise and the site, however there is a degree of separation owing to the distances between and the stark change in landscape character from the elevated high lands of the Slieve Blooms and the Rock of Dunamaise to the lowlands of the windfarm site which reduces the overall sense of intrusion on the landscape that the windfarm could

be perceived to have. The magnitude of effects on the landscape are therefore considered to be medium to low and when beyond a 5km radius are considered to be negligible.

8.149. Guidance in relation to the assessment of visual impacts within the current guidelines, relates to the siting, layout and landscape setting of the proposed windfarm. Section 6.3 of the 2006 guidelines refers to the positive effects of forestry within the setting of a turbine and the counterbalance that such landscape features can provide. Refence is also made to the preferable positioning of the proposed turbines on a rising slope. Visual stacking of turbines should be avoided and the location of staggered turbines in an open landscape is preferable.

8.150. These requirements are also contained within the draft Wind Energy Guidelines 2019, within which it is a requirement for visual impact assessment to extend to lands within a 15km radius. The draft guidelines state that the potential for visual disturbance can be considered as dependent on the scale of the proposed turbine and the associated distance. Thus, a setback which is the function of size of the turbine should be key to setting the appropriate setback. A setback distance of 4 times the tip height should apply between a wind turbine and the nearest point of the curtilage of any residential property in the vicinity of the proposed development subject to a mandatory minimum set back of 500 metres.

8.151. I note that the nearest third party dwelling is located in excess of 500 metres from the development site and as such the proposed windfarm complies with this criteria.

8.152. Whilst I acknowledge the concerns raised within the third party appeal in relation to visual impacts and I note it is recognised by the applicant that local residents are among the most susceptible viewer, these views are constrained by the fact that the lands are located within low lying lands and as such elevated views in either direction cannot be achieved. In addition, the surrounding landscape is interspersed with vegetation which reduces the visual presence of the turbines within the closest dwelling locations.

8.153. I note that with regard to mitigation measures it is stated that measures such as stacking of turbines and their placement within the landscape can be utilised to reduce visual impacts, however it is not possible to mitigate fully such impacts.

8.154. The residual affects are outlined in section 11.7 of the EIAR and it is of note that within the 5km radius of the site, views are also constrained by the presence of vegetation along roads and within farmed lands.

8.155. Visual impacts during the construction stage of the development are likely to be similar in terms of magnitude to that outlined above in relation to landscape and are outlined within section 11.8 of the EIAR also. No significant effects are expected to arise.

8.156. The magnitude of change to the delivery route is considered to be negligible to low as works will be largely within the existing road verge and no change will occur to the wider landscapes.

8.157. In relation to the grid connection route the magnitude of change is considered to be low given the development is within the carriageway of the road.

8.158. I consider the remaining views where turbines are visible to be laid out in a manner that responds adequately to the topography of the lands, resulting in a development that does not overly dominate the views from these locations. Views are broken up with intervening vegetation and/or buildings and the full windfarm development is therefore not clearly visible from most of the viewpoints thus reducing and softening the magnitude of change from these viewpoints. It is also of note that many of the viewpoints are located some distance from the development site and low number of turbines are visible from these areas, in such instances effects are likely to be slight in terms of magnitude.

8.159. Having reviewed the documentation and photomontages I am satisfied that the layout of the proposed windfarm is in accordance with the requirements of the guidelines and will not give rise to significant visual effects in the context of the surrounding area.

8.160. Cumulative impacts were considered in the context of existing and permitted windfarm development within the vicinity of the site and forestry operations and it was concluded within the EIAR that cumulative impacts would not arise.

8.161. Decommissioning of the development is not likely to give rise to significant landscape or visual effects. The landscape will be allowed to regenerate, and, in this case, it is likely that the landscape will return to a similar state as it is today, with forestry operations also continuing.

8.162. Overall, the proposed development will introduce new structures into the landscape which will be visible from a number of locations, however I am satisfied, based on the

information submitted, that whilst the development can be seen as a visual intrusion within the landscape it will not create an unacceptable obstruction to views within the landscape and will for the large part form an additional element to a view rather than form the central dominant element to a view as such I consider landscape and visual effects to be acceptable and would not be of such a magnitude as to warrant a refusal of the development on this basis.

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

**Cultural Heritage**

8.164. Section 15 of the EIAR examines the potential for impacts to arise on cultural heritage. I note that concerns are raised in relation to the potential for impacts to arise in relation to cultural heritage and tourism. A desktop survey was carried out in order to identify constraints or features of archaeological / cultural heritage potential within or near to the development site. A field inspection was carried out on 31st July 2019. No unrecorded features of archaeological or cultural heritage were identified within the windfarm site. There are no Recorded Monuments or National Monuments in State Care or monuments subject to Preservation Orders within the proposed windfarm development site or the underground cable site. Albeit there are 3no. recorded archaeological sites and 9 no. recorded architectural heritage features within the defined study area which comprised a 2km radius from the proposed windfarm development site and 100 metres underground cable site. However, it is stated that due to intensive land improvement works throughout the windfarm area and road carriageway construction along the UGC route the overall archaeological potential to reveal subsurface archaeological features is low. I note that field walkovers indicate that lands within the windfarm are non-archaeological in nature.

Potential impacts

8.165. In the absence of any recorded monuments within the windfarm site, grid connection route and works areas, there are no predicted impacts to the recorded archaeological resources during the construction phase. It is of note that reference is made within section 15.6.1.2 of the EIAR to 3 no designated architectural heritage assets located in close proximity to the UGC route, Bay Bridge over the Barrow, (this feature will not be directly impacted). Kilnahown Bridge (the UGC will be installed using directional drilling and will not directly impact the bridge) and a Cast iron Post Box c. 1890 at Garryhinch, the post box is elevated and will not be directly impacted by the UGC.

8.166. Whilst none of the above will be directly impacted there is a potential for impacts to occur accidentally.

8.167. Similarly, no cultural heritage assets will be directly impacted by the construction of the proposed wind farm, grid connection or works areas but there is also a potential for accidental damage to those located in close proximity to the works.

8.168. There are no likely significant effects expected in relation to the operation of the development and it is of note that there are no tourism attractions in close proximity to the development site, impacts to tourism are therefore not expected.

8.169. Cumulative impacts have been considered within section 15.6.3 of the EIAR and include three existing windfarms within a 20km radius of the proposed windfarm development site along with other existing and permitted developments including solar farms, waste processes, energy storage facilities and the Grid connection to Bracklone Substation. Having considered the aforementioned developments, it is stated that no identified likely or significant cumulative effects are expected in relation to archaeological, architectural, or cultural heritage resources at the proposed windfarm development or grid connection route.

8.170. Mitigation measures are outlined in the EIAR and include pre-construction archaeological testing and monitoring of groundworks during construction, the preparation of a detailed method statement and management plan shall be prepared in relation to works near to Bay Bridge, Kilnahown Bridge, Garryhinch post box which shall address the construction methods and buffers to be provided around these features.

8.171. I consider these mitigations measures to be appropriate and acceptable to ensure that impacts do not arise in relation to archaeology, architectural and cultural heritage.

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

**Air Quality and Climate Change**

8.173. Section 16 examines the impacts of the development on climate and air. A desktop study was undertaken of available climatic information to characterise the climate in the local region.

8.174. Local Climate conditions are outlined in Section 16.3 of the EIAR and are based on data from the synoptic station located at Oak Park between 2016- Aug 2019.

8.175. Potential air quality impacts are anticipated to be short term confined to the construction phase of the development. Emissions will be solely associated with construction vehicles and the generation of dust. The applicant applied the NRA criteria in relation to dust and the overall construction of the proposed development would be considered a moderate construction site.

8.176. It is not proposed that an air quality impact will occur due to traffic at the proposed development as the impacts will fall below the screening criteria set out in the UK DMRB. It is of note that the combined increase in HGV and LGCs is 71 trips over a 12month period.

8.177. It is proposed to mitigate such emissions by maintaining machinery and vehicles in good working order and employing measures which reduce the number of delivery vehicles to the site. No significant effects on air quality are considered likely.

8.178. Impacts from machinery used on site are expected to be negligible due to the scale and length of operation time.

8.179. With regard to the operation of the development it is stated that there will be no significant direct emissions to atmosphere. A diesel generator will be located at the

substation for emergency/back up power supply. Overall it is stated that the operation of the windfarm will result in positive impacts on air quality due to the displacement of fossil fuels as an energy source.

8.180. Carbon balance are also examined within Section 16.4.4 of the EIAR. It is stated that the proposed development will result in some carbon losses due to the manufacturing, construction and decommissioning stage of the wind turbines and the drainage and excavation of organic soil/ peat during the construction phase.

8.181. While there is peat across the site, it is not by definition a fen or acid bog. The site is highly modified and has been drained to facilitate commercial forestry. The hydrological regime across the site has already been significantly altered.

8.182. The proposed wind farm will result in a total carbon loss of 58,764 tonnes but will displace 1,655,640 tonnes of CO2 over the a 30 year period.

8.183. Cumulative impacts were considered under Section 16.4.5 of the EIAR. Developments within the vicinity of the site were considered and it was concluded within the EIAR that cumulative impacts would not arise. The potential cumulative impact with other renewable energy projects will be a long term significant positive effect on air quality and climate.

8.184. Mitigation in the form of a Construction Environmental Management Plan is proposed and will guide development in a manner which reduces dust and fugitive machinery emissions arising at the development site. Measures will include the prevention of idling vehicles and the maintenance of vehicles in good working order so as to prevent leakages and unnecessary air emissions. No significant residual emissions are expected in this regard.

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

8.186. **Traffic and Transport**

8.187. With regard to transport infrastructure, section 10 of the EIAR outlines the details of the surrounding road network to the windfarm site which comprises largely regional roads. The grid connection route which runs between the proposed wind farm and the proposed Bracklone substation and will follow both local and regional roads for its duration and will also be required to cross two crossings at the railway. Works at railway crossings occur at Kilbride cross roads, Deerpark cross roads and Canal road. At two locations the cable will be laid in the bridge deck and at the other location the trench will be installed beneath the railway.

8.188. It is stated that aggregates will be sourced locally, and number of haul routes have been identified within fig 10.5. Turbine delivery route will likely be from Dublin Port and travel along the M6 onto the N80

8.189. During the construction of the access roads, crane hardstands and substation buildings, a worst-case scenario estimates that the maximum number of loads to be delivered to the wind farm work area would be approximately 14,516 (two way).

8.190. An average work force of 30 people will be required increasing to 45 people at peak periods of construction which is likely to give rise to 40 additional LGV trips per day.The combined HGV and LGV average daily increase is 97 trips per day. The overall magnitude of affects in this regard are expected to be low.

8.191. Repairs will be carried out on the public road network, as necessary, during the construction phase, to ensure that the condition does not deteriorate below a standard that could affect the use of the site, as required. Following completion of construction, the condition of the public road network will be of at least the same standard as it was prior to commencement of construction. It is stated that the transport of abnormal loads will be subject to a permit. Deliveries are over a short duration and will not give rise to significant traffic impacts. The installation of the grid connection will be advanced using rolling lane closures. The magnitude of effects in relation to the grid connection is considered to be slight to moderate in the absence of mitigation. Whilst the grid connection will be the subject of a separate consent I note that details of the route are outlined in order to examine any potential cumulative effects of the development.

8.192. I note that the carrying capacity of effected roads has been assessed and are found to be operating within and below capacity limits and therefore have capacity to cater for the proposed development.

8.193. With regard to the operation of the development, effects are expected to be imperceptible, due to the low levels of traffic associated with the operation of the windfarm.

8.194. Decommissioning of the windfarm will give rise to similar effects associated with the construction of the development.

8.195. Mitigation is proposed within section 10.7 of the EIAR and includes the preparation of a traffic management plan, the employment of a traffic co-ordinator, identified haul routes, road condition surveys, road reinstatement, letter drops for road closures, road sweeper and maintenance of local access etc. With the implementation of mitigation, the magnitude of residual affects range from slight to negligible.

8.196. Having regard to the foregoing, whilst I acknowledge the concerns raised within the third party appeals in relation to traffic related disturbance during the construction period, this is for a limited period of time and as such will not be significant.

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

**Telecommunications and Aviation**

8.198. Section 9 examines the impact of the proposed development on telecommunications and aviation.

Telecommunications

8.199. Impacts in relation to the telecommunications - Baseline conditions were established, and network providers were consulted to identify potential risks arising from the

development. No issues in relation to interference with telecommunications were raised by any operator.

Aviation

8.200. With regard to aviation, the nearest PSR/SSR system is Dublin Airport which is over 75 km from the development site, no assessment is required in term of windfarm interference due to the distances present. A local airfield is present 6.1km to the south east of the proposed windfarm. Other airfields are in excess of 30km away. No concerns were raised by any of the nearby airfields. A warning light system will be required and can be adequately dealt with by way of condition.

8.201. No residual impacts are expected.

8.202. I have considered all of the written submissions made in relation to telecommunications and aviation and the relevant contents of the file including the EIAR. I am satisfied that the potential for impacts on telecommunications and aviation can be avoided with suitable conditions. I am therefore satisfied that the potential for direct or indirect impacts on telecommunications and aviation can be ruled out. I am also satisfied that cumulative effects, in the context of existing wind development in the surrounding area and other existing and proposed development in the vicinity of the site, are not likely to arise.

**Interactions between the Factors and Cumulative Impacts**

8.203. I have considered the interrelationships between factors and whether these may as a whole affect the environment, even though the effects may be acceptable when considered on an individual basis. Section 17 of the EIAR provides a matrix of the impact interactions.

8.204. I consider that there is potential for population and human health to interact with all of the other factors (biodiversity, water, air and climate, noise, landscape and visual, cultural heritage and material assets – traffic). The details of all other interrelationships are set out in Table 17-2 of the EIAR which I have considered.

8.205. I am satisfied that effects as a result of interactions, indirect and cumulative effects can be avoided, managed and / or mitigated for the most part by the measures which form part of the proposed development, the proposed mitigation measures detailed in the EIAR, and with suitable conditions.

**Reasoned Conclusion**

8.206. Having regard to the examination of environmental information contained above, to the EIAR and supplementary information provided by the applicant and the submissions received, the contents of which I have noted, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows.

- Negative impacts on **human health and population** arising from construction include noise, traffic and dust disturbance to residents of neighbouring dwellings. All of these impacts are low to moderate. Adequate mitigation measures are proposed to ensure that these impacts are not significant and include adequate mitigation for operational noise.
- Benefits/positive impacts on the **Air and Climate**, the proposed development will have a significant positive effect on human health and population due to the displacement of $CO_2$ from the atmosphere arising from fossil fuel energy production.
- Negative impacts on **Water** could arise as a result of accidental spillages of chemicals, hydrocarbons or other contaminants entering the drainage system and discharging to the river thereafter during the construction and operational phases. These impacts will be mitigated by measures outlined within the application and can therefore be ruled out.
- Negative **Noise and Dust** impacts arise during the construction phase from construction activities. These impacts will be mitigated through adherence to best practice construction measures. Noise disturbance from the operation of turbines is not likely to arise given the separation distances between turbines and residential properties. Impacts arising from noise and dust disturbance during both the construction and operational stage can therefore be ruled out.
- Negative **traffic** impacts arise during the construction phase of the development, these impacts will be mitigated through the implementation of a traffic management plan and a construction management plan. Impacts arising from traffic can therefore be ruled out.

8.207. The EIAR has considered that the main significant direct and indirect effects of the proposed development on the environment would be primarily mitigated by

environmental management measures, as appropriate. Thus, having regard to the foregoing assessment, I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect effects on the environment.

## 9.0 Recommendation

9.1. I recommend that permission is granted subject to the following conditions:

## 10.0 Reasons and Considerations

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

**European legislation**, including of particular relevance:

- Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directives) which set the requirements for Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union.
- EU Renewable Energy Directive 2009/28/EC which aims to promote the use of renewable energy

**National and regional planning and related policy, including:**

- National policy with regard to the development of alternative and indigenous energy sources and the minimisation of emissions from greenhouse gases,
- the provisions of the Wind Energy Development Guidelines – Guidelines for Planning Authorities issued by the Department of the Environment, Heritage and Local Government in June, 2006,

**Regional and local level policy, including the:**

- Regional Spatial Economic Strategy for the Eastern and Midland Region

**The local planning policy** including:

- Laois Development Plan
- other relevant guidance documents
- the nature, scale and design of the proposed development as set out in the planning application and the pattern of development in the vicinity,

- the likely consequences for the environment and the proper planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites
- the submissions and appeals made to An Bord Pleanála in connection with regard to the planning application, and
- the report and recommendation of the Inspector, including the examination, analysis and evaluation undertaken in relation to appropriate assessment and environmental impact assessment.

10.1. **Proper Planning and Sustainable Development**

10.2. It is considered that the proposed development would accord with European, national, regional and local planning and that it is acceptable in respect of its likely effects on the environment and its likely consequences for the proper planning and sustainable development of the area.

**Appropriate Assessment:**

The Board agreed with and adopted the screening assessment and conclusion carried out in the inspector's report that the River Barrow and River Nore SAC is the European sites for which there is a likelihood of significant effects.

The Board considered the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment of the implications of the proposal for the River Barrow and River Nore SAC, in view of the Site's Conservation Objectives. The Board considered that the information before it was adequate to allow the carrying out of an appropriate assessment.

In completing the assessment, the Board considered, in particular, the

i. Likely direct and indirect impacts arising from the proposal both individually or in combination with other plans or projects, specifically upon the River Barrow and River Nore SAC,
ii. Mitigation measures which are included as part of the current proposal,
iii. Conservation Objective for this European Site, and
iv. Views of prescribed bodies in this regard.

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

In overall conclusion, the Board was satisfied that the proposed development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Site, in view of the site's conservation objectives.

**Reasoned Conclusion for EIA**

The Board considered that the Environmental Impact Assessment Report, supported by the documentation submitted by the applicant, provided information which is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the proposed development on the environment, taking into account current knowledge and methods of assessment. The Board is satisfied that the information contained in the Environmental Impact Assessment Report is up to date and complies with the provisions of EU Directive 2014/52/EU amending Directive 2011/92/EU. The Board considered that the main significant direct and indirect effects of the proposed development on the environment are those arising from the impacts listed below.

The main significant effects, both positive and negative, are:

- Negative impacts on **human health and population** arising from construction include noise, traffic and dust disturbance to residents of neighbouring dwellings. All of these impacts are low to moderate. Adequate mitigation measures are proposed to ensure that these impacts are not significant and include adequate mitigation for operational noise.
- Benefits/positive impacts on the **Air and Climate**, the proposed development will have a significant positive effect on human health and population due to the displacement of $CO_2$ from the atmosphere arising from fossil fuel energy production.
- Negative impacts on **Water** could arise as a result of accidental spillages of chemicals, hydrocarbons or other contaminants entering the drainage system and discharging to the river thereafter during the construction and operational

phases. These impacts will be mitigated by measures outlined within the application and can therefore be ruled out.

- Negative **Noise and Dust** impacts arise during the construction phase from construction activities. These impacts will be mitigated through adherence to best practice construction measures. Noise disturbance from the operation of turbines is not likely to arise given the separation distances between turbines and residential properties. Impacts arising from noise and dust disturbance during both the construction and operational stage can therefore be ruled out.
- Negative **traffic** impacts arise during the construction phase of the development, these impacts will be mitigated through the implementation of a traffic management plan and a construction management plan. Impacts arising from traffic can therefore be ruled out.

Having regard to the above, the Board is satisfied that the proposed development would not have any unacceptable direct or indirect effects on the environment. The Board is satisfied that the reasoned conclusion is up to date at the time of making the decision.

## 11.0 Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, 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 interest of clarity.

2. The period during which the development hereby permitted is constructed shall be 10 years from the date of this order.

   **Reason:** In the interests of clarity.

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

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

4. The developer shall ensure that all construction methods and environmental mitigation measures set out in the Environmental Impact Assessment Report and associated documentation are implemented in full, save as may be required by conditions set out below.

   **Reason:** In the interest of protection of the environment.

5. The developer shall retain the services of a suitably qualified and experienced bat specialist to undertake appropriate monthly bat surveys within the relevant period for this site for a minimum period of 3 years. Details of the surveys to be undertaken and associated reporting requirements shall be developed following consultation with, and agreed in writing with, the planning authority prior to commencement of development. These reports shall be submitted on an agreed date annually for three years, with the prior written agreement of the planning authority. Copies of the reports shall be sent to the Department of Housing, Local Government and Heritage. In the event that significant barotrauma levels recorded the effected turbines shall be ceased from operation until adequate mitigation measures are agreed with the Local Authority and fully implemented.

   **Reason:** To ensure appropriate monitoring of the impact of the development on the bats of the area.

6. In the event that invasive plant species are found prior to or during works at the appeal site, the applicant shall submit an Invasive Management Species Action Plan for the written approval of the planning authority which shall include full details of the eradication of the such invasive species from the appeal site prior to construction on the site or if discovered during construction as soon as is practicably possible.

**Reason**: In the interest of nature conservation and mitigating ecological damage associated with the development.

7. Trees to be felled and buildings to be demolished shall be examined prior to felling and demolition to determine the presence of bat roosts. Any works shall be in accordance with the TII Guidelines for the Treatment of Bats during the construction of National Road Schemes.

   **Reason:** In the interest of wildlife protection.

**8.** (a) No additional artificial lighting shall be installed or operated on site unless authorised by a prior grant of planning permission.

b) CCTV cameras shall be fixed and angled to face into the site and shall not be directed towards adjoining property or the road. Their location within the compound shall be agreed with the Planning Authority prior to commencement of work on site.

(c ) All lighting shall be operated in such a manner as to prevent light overspill to areas outside of the compound.

(d) Prior to the commencement of development the applicant shall submit a detailed lighting plan for the written agreement of the planning authority. The plan shall include the type, duration, colour of light and direction of all external lighting to be installed within the external areas of the development site.

**Reason:** In the interests of clarity, and of visual and residential amenity and protection of local biodiversity.

9. The developer shall comply with the following aviation requirements:

   Notify the Irish Aviation Authority of their intention to commence crane activities with a minimum of 30 days prior notification of their erection.

   Consult with the Irish Aviation Authority and the Dublin Airport Authority and develop mitigation measures for bird hazards. Details to be submitted to the planning authority for written agreement.

   **Reason:** In the interest of orderly development.

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

(a) Between the hours of 7am and 11pm:

i. the greater of 5 dB(A) $L_{90,10min}$ above background noise levels, or 45 dB(A) $L_{90,10min}$, at standardised 10m height above ground level wind speeds of 7m/s or greater

ii. 40 dB(A) $L_{90,10min}$ at all other standardised 10m height above ground level wind speeds

(b) 43 dB(A) $L_{90,10min}$ 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 such as the de-rating of particular turbines. All noise 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 six months of commissioning of the wind farm.

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

11. Prior to commencement of development, the developer shall submit to and agree in writing with the planning authority a Shadow flicker compliance monitoring programme for the subject development, including any mitigation measures such as the use of appropriate equipment and software to suitably control shadow flicker at nearby dwellings, including control of turbine rotation, in accordance with details which shall be submitted to, and agreed in writing with, the planning authority. 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.

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

12. Prior to the commencement of development, the applicant shall submit to and agree in writing with the planning authority, details of an obstacle warning light scheme which can be visible to night vision equipment.

**Reason:** in the interest of aviation safety.

13. The construction of the development shall be managed in accordance with a Construction Environment Management Plan, which shall be submitted to, and agreed in writing with the planning authority prior to commencement of development. This plan shall provide details of intended construction practice for the development, including hours of working, noise management measures and off-site disposal of construction/demolition waste.

**Reason:** In the interests of public safety and residential amenity.

14. Water supply, wastewater treatment and surface water attenuation and disposal shall comply with the requirements of the planning authority for such works and services.

**Reason:** In the interest of public health

15. The following design requirements shall be complied with:

(a) The wind turbines including masts and blades, and the wind monitoring mast, shall be finished externally in a light grey colour.

(b) Cables within the site shall be laid underground.

(c) The wind turbines shall be geared to ensure that the blades rotate in the same direction.

(d) No advertising material shall be placed on or otherwise be affixed to any structure on the site without a prior grant of planning permission.

**Reason:** In the interest of visual amenity.

16. The delivery of large-scale turbine components for the construction of the windfarm shall be managed in accordance with a Traffic Management Plan, 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 road network to be used by construction traffic, including over-sized loads, and detailed arrangements for the protection of bridges, culverts or other structures to be traversed, as may be required. The plan should also contain details of how the developer intends to engage with and notify the local community in advance of the delivery of oversized loads.

**Reason:** In the interests of public safety and residential amenity.

17. On full or partial decommissioning of the turbines or if the turbines cease operation for a period of more than one year, the mast and the turbine concerned shall be removed and all decommissioned structures shall be removed, and foundations covered with soil to facilitate re-vegetation, within three months of decommissioning.

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

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 turbines and following consultation with the relevant authorities.

**Reason:** In the interest of protecting telecommunications signals and of residential amenity.

19. 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 the proper planning and sustainable development of the area.

20. All new surface water outfalls shall be constructed in a manner which protects riparian habitat and does not result in excessive erosion of such habitat.

**Reason:** In the interest of habitat protection.

21. The developer shall retain the services of a suitably qualified and experienced Ecologist to undertake pre-construction surveys at the various project elements, including any river crossings, immediately prior to commencing work in order to check for the presence of protected species and bird species in the vicinity.

**Reason:** In the interest of protecting ecology and wildlife in the area.

22. The developer shall facilitate the preservation, recording and protection of archaeological materials or features that may exist within 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) relating to the proposed development,

(b) Employ a suitably-qualified archaeologist who shall monitor all site investigations and other excavation works, and

(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.

23. The developer shall retain the services of a suitably qualified and experienced bird specialist to undertake appropriate annual bird surveys of this site. Details of the surveys to be undertaken and associated reporting requirements shall be developed following consultation with, and agreed in writing with, the planning authority prior to commencement of development. These reports shall be submitted on an agreed date annually for five years, with the prior written agreement of the

planning authority. Copies of the reports shall be sent to the Department of Housing, Local Government and Heritage.

**Reason:** To ensure appropriate monitoring of the impact of the development on the avifauna of the area.

24. 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.

25. 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 satisfactory reinstatement of the site upon cessation of the project, coupled with an agreement empowering the planning authority to apply such security or part thereof to such reinstatement. 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 orderly development and visual amenity and to ensure satisfactory reinstatement of the site.

26. 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 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 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, as amended, that a condition requiring a contribution in accordance with the Development Contribution Scheme made under section 48 of the Act be applied to this permission

Sarah Lynch
Senior Planning Inspector

28th September 2022