



An  
Bord  
Pleanála

## Inspector's Report ABP-308448-20

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<b>Development:</b>	Development consisting of a 110kV 'loop in/loop out' electrical substation and ancillary works to connect the already consented Pinewoods Wind Farm to the national electricity grid
<b>Location:</b>	Knockardagur, Ballinakill. Co Laois.
<b>Planning Authority:</b>	Laois Co Council.
<b>Applicant:</b>	Pinewood Wind Limited.
<b>Type of Application:</b>	Application under the provisions of section 182A of the Planning and Development Act, 2000, as amended.
<b>Observers</b>	<ol style="list-style-type: none"><li>1. Geological Survey of Ireland.</li><li>2. Transport Infrastructure Ireland.</li><li>3. Department of Tourism, Culture, Arts, Gaeltacht, Sports and Media.</li><li>4. Ballypickas GAA Club</li><li>5. Board of Management Knock NS</li><li>6. John Fingleton &amp; Mary White.</li></ol>

7. RTS Community Group.
8. Brian Brennan.
9. Kieran Brophy, Peter Sweetman & Wild Ireland Defence on behalf of concerned residents of Spink.

**Date of Site Inspection**

April 27<sup>th</sup>, 2021.

**Inspector**

Breda Gannon.

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## 1.0 Introduction

An application under the provisions of Section 182A of the Planning and Development Act, 2000, as amended, was received by An Bord Pleanála from Pinewood Wind Limited for the development of a 110kV substation to facilitate the export of renewable electricity generated by the permitted 'Pinewood Wind Farm' to the national electricity grid.

## 2.0 Site Location and Description

The site is located c 1.2km north of the county boundary between County Laois and Co Kilkenny in the townland of Knockardugar, Co. Laois. It lies approximately 17km south-west of Portlaoise and c 25km north of Kilkenny city. The nearest towns are Abbeyleix and Castlecomer, c. 8km to the north-west and south-east respectively. The village of Ballinakill is c 4km to the south-west. The site is accessed from the R430 via the local road network.

The site has a total area of 5.5 hectares and is part of a larger agricultural holding comprising agricultural grassland/pasture with mature hedgerows and occasional trees at the boundaries. The site is bordered to the south by a public road, by open grassland to the north and east and by a hedgerow to the west. The area is rural and residential development is in the form of one-off dwellings, with the nearest located c 100m to the east of the proposed substation.

The area is part of the Castlecomer Plateau upland area, characterised by undulating hills and steep escarpments at its fringes. The site slopes east to west with elevations ranging from 225-250mOD. The site is drained by the Knockardugar stream to the south of the substation footprint.

The proposed substation would be located immediately east of the permitted 110kV transmission line (Laois-Kilkenny Grid Reinforcement Project).

## 3.0 Proposed Development

Planning permission is sought for the following:

- A 110 kV loop-in/loop-out Air Insulated Switchgear (AIS) electrical substation with a 'split-level' design, including two single-storey buildings (589 m<sup>2</sup>), 1 no. transformer bay, 2 no. line bays and all associated electrical equipment, services and lighting enclosed within a 2.95m high fenced compound (13,100 m<sup>2</sup>).
- 2 no. lattice-type strain towers with a maximum height of up to 21m and approximately 70m of 110kV overhead electricity line to facilitate connection of the proposed substation to the 110kV transmission line (Laois-Kilkenny Grid Reinforcement Project).
- Approximately 0.65km of on-site access track with associated site access from the public road (L77951), and
- All associated and ancillary site development, excavation, construction landscaping and reinstatement works, including provision of site drainage infrastructure and surface water protection measures.

The proposed development would facilitate the export of renewable electricity generated at the permitted Pinewood Wind Farm to the national grid via the permitted 110kV transmission line to the west. The substation would be connected to the Pinewood Wind Farm via underground electrical cabling.

Due to the sloping nature of the site, a split-level design approach has been adopted for the proposed development. The substation compound would be surfaced with free-draining crushed stone to allow rainwater to percolate to ground and the boundaries would be landscaped with native species. The control buildings would be finished with in a sand and render finish and a slate roof covering. The strain towers would be located immediately beneath the permitted 110 kV transmission line.

A full description of the proposed development is provided in Chapter 3 of the EIAR. Drawings are included in Volume 2 (Annexes)

A ten-year permission is sought for the development. The application is supported by an Environmental Impact Assessment Report and a Natura Impact Statement.

## 4.0 Planning History

The most relevant planning history is as follows:

**PL 11.248518** - Planning permission granted on appeal for an 11 no. turbine wind farm (Pinewood Wind Farm) and associated infrastructure. (Laois Co. Council Reference No. 16/260)

**PL10.248392** – Planning permission granted on appeal for infrastructural works (access track, underground electricity and communications cabling) to support the wind farm in Co Laois. (Kilkenny Co. Council Ref No 17/62).

The application for the wind farm in Co Laois included a substation in the townland of Knockardagur, which was excluded from the permission (PL10.248518) on the grounds that it would constitute strategic infrastructure development under the provisions of the Planning and Development Act 2000, as amended, which is subject to a separate planning application process.

**ABP 303194** – The Board determined that the development of the 110kV substation falls within the scope of section 182A of the Planning and Development Act, 2002, as amended, and that a planning application should be made directly to the Board. The applicant is now seeking planning permission for the substation from the Board, (albeit of an amended design and layout) under section 182A of the Act.

## 5.0 Consultations

The applicant circulated details of the application to the following bodies:

- Development Applications Unit, Department of Media, Tourism, Arts, Culture, Sport and the Gaeltacht.
- Minister for Communications, Climate Action & Environment.
- Kilkenny Co. Council.
- Laois Co. Council.
- Transport Infrastructure Ireland.
- Failte Ireland.
- An Taisce.

- The Heritage Council.
- Inland Fisheries Ireland.
- Health Service Executive.
- Commission for Regulation of Utilities.
- Irish Water.

Responses were received from Laois Co Council, Development Applications Unit, Transport Infrastructure Ireland, the Health Service Executive and the Geological Survey of Ireland.

## 6.0 Submissions/Observations

### 6.1. Laois County Council

A submission dated November 14<sup>th</sup>, 2020, was received by the Board from the planning authority. It sets out the planning history relating to the site and surrounding area and relevant national, regional and local planning policies. Other matters considered include natural heritage, architectural and archaeological heritage, landscape/ visual impacts and roads.

The main points are summarised as follows:

Planning section -. The strategic importance of the proposed development is acknowledged as a critical element of physical infrastructure required to facilitate future economic and social development, as well as responding to issues of climate change in Co. Laois and the wider region.

The planning authority does not consider that the proposed development would give rise to any significant landscape or visual impacts.

Road Design section – The main issues raised relate to concerns in relation to the local road network close to the site. Further information is required on the following:

- haul routes for the construction stage,
- condition surveys of the public roadway and all structures (culverts, bridges),



- details of how the existing road network will be maintained during construction,
- detailed drawings, design and specifications for full reconstruction works to the main local road junctions and a revised site entrance layout in compliance with the minimum requirements set out in Laois Co. Council's 'Roads & Parking Standards'.
- Traffic Management Plan.

Drainage –additional information required on surface water disposal from the proposed development.

## 6.2. Prescribed Bodies

### Development Applications Unit

Archaeology – There are no Recorded Monuments or other known archaeological remains within the area of the proposed development. The development is large in scale and the potential exists for groundworks to disturb previously unrecorded archaeological material. Pre-development archaeological testing is recommended.

Nature Conservation (Matters relating to Appropriate Assessment) – The DUA notes the connectivity between the site and the River Barrow and River Nore SAC and the presence of Nore Freshwater Pearl mussel in a section of the River Nore. It is imperative that additional silt does not enter the watercourse as a result of the proposed development.

Further information is required in relation to the following:

- provision of a suitably sized vegetated buffer zone between the top of the drain/stream banks and the silt fencing. The applicant should provide the rationale for its selection with reference to best scientific evidence, ecological guidance and planning policy.
- Details of the locations of all silt fences.
- Precise design details of settlement ponds and lagoons and measures to maintain and monitor the functioning of the ponds and lagoon at operational stage.

- The impacts of on-going weed control using herbicide on watercourses has not been assessed in the AA/EIAR.

Matters relating to the EIAR – The effects of the development on bat species have not been adequately assessed. A dedicated bat survey should be carried out, providing information on the species assemblage, the location of roosts (particularly maternity and hibernation), the location and extent of commuting/foraging habitat (to include the site and also flight paths and habitats in the surrounding landscape that are likely to bring bats to the site), the amount of bat activity on the site and its spatial and temporal distribution. The cumulative impacts of the proposed development in conjunction with the proposed windfarm must be assessed. Mitigation in relation to artificial lighting required to minimise the use of the area by bat species must be clearly outlined including specifications of lighting masts and columns.

#### Health Service Executive

From the information submitted it would appear that a large change in the noise environment could occur as a result of construction on the site. As noise monitoring was not conducted at the nearest noise sensitive receptor, it is difficult to assess the change in the noise environment.

It is recommended that the applicant defines the scale of change in the existing noise environment as a result of proposed construction works and assess the significance of this change and its possible impact on the nearest noise sensitive locations.

It is recommended that applicants proposals be implemented as follows:

- establish communication channels between the contractor/developer, local authority and residents,
- appoint a site representative responsible for matters relating to noise/vibration and,
- monitor typical levels of noise/vibration during critical periods and at sensitive locations.

### Transport Infrastructure Ireland

It is unclear if there are abnormal loads associated with the proposed development.

If abnormal loads are proposed the following is required:

- an assessment of all structures concerned to confirm that they can accommodate the proposed loadings associated with the delivery of the substation compounds, where the weight of the delivery vehicle and load exceed that permissible under the Roads Traffic Regulations.
- full assessment of all structures on the national road network along the haul route. Relevant road authorities along the haul route should confirm their acceptance of applicant's proposals.
- Referral of all proposals agreed between the road authorities and the applicant, impacting on the national road network, to TII.

### Geological Survey of Ireland

- Acknowledges the use of GSI's database in the EIAR (Chapter 6 and Chapter 7)
- Would appreciate a record of reports detailing any site investigations carried out.

## **6.3. Observations**

### Ballypickas GAA Club

- Negative impacts of the proposed development on people living in the area, with implications for their health, wellbeing and sustainable community living.
- Depopulation of the area, arising from the development of the windfarm in close proximity to residential areas, which would have a detrimental effect on the future of the GAA club.

### Board of Management Knock National School

- Original concerns remain regarding the windfarm, which were expressed to the Board (PL 11.248518).

- Concerns have increased since the ministerial direction on Laois Co. Council to remove their safety measures relating to windfarms from the development plan.
- Scale of the development in close proximity to the school.
- The windfarm and the associated substation are wholly unsuitable for the area as it carries the high risk of compromising the need of both current and future generations of this school community, contrary to the principles of sustainability.
- New commercial development should be unobtrusive, minimising negative visual impact on the rural landscape and be sensitive to people who live and attend school in the area. Developments in renewable energy production are progressing and there are more sustainable options available, which would be more acceptable in close proximity to a rural school community.
- Health, safety and welfare of children attending the school.
- The establishment of a 'node' on the national electricity network implies that the substation will be used for interconnections to other areas, including the potential for significant overhead cabling being erected close to the school.

#### John Fingleton & Mary Kelly

- The application considers all possible impacts of the proposed development and details the mitigation measures that will be implemented. There are no unacceptable impacts.
- In light of the urgent need to address climate change the 'do-nothing' scenario is not an option. Planning permission should be granted subject to appropriate conditions.

#### RTS Community Group

- The community already had the burden of the Laois-Kilkenny Reinforcement Project.
- Refers to ECJ judgement C24/19 and states that this now questions the validity of all consents granted under the 2006 Wind Energy Development Guidelines.

- Not only should the current application for a substation be declined, the entire project should not be assessed in the absence of SEA.

Brian Brennan

- Is the Operator and Accountable Manager of Midland Heliport Ltd and refers to lack of consultation with regard to proposed windfarm. Has concerns that the development may impinge on the Obstacle Clearance Area required.
- As the heliport falls under the Aerodrome Regulations both with regard to compliance with the IAA and ESRA/European Commission Regulations, it is imperative that any proposed development takes into account and mitigates for the operation of the site.
- Concerned that no consideration has been given to the fact that a functioning aerodrome is in operation in the vicinity of the proposed development.

Kieran Brophy, Peter Sweetman and Wild Ireland Defence on behalf of concerned residents of Spink.

- For EIA/AA the Board must consider the effects of all connected development.
- The windfarm granted under PI 248518 is currently under judicial review (2019 768 JR).
- All farmers/landowners are out of contract with Gaeltech/Pinewood since August 2019.
- The observations and submissions from the original windfarm applications are all relevant and should be taken into account. The original applications included the substation before the project was split.
- The development is very close to Midland Heliport airfield. There is no record of consultation with IAA.
- Both Laois and Kilkenny Co. Councils have refused permission for this substation and windfarm on previous occasions.
- The operational duration of the proposed sub-station does not match that of the proposed windfarm,

- The site is situated directly off Cooper's Mountain Walk, which features an enclosed roadside spring next to the proposed substation location, unspoilt flora and fauna, a site of archaeological importance and a narrow vehicle free track for over 3 miles. The proposal to widen the track to accommodate the windfarm and substation, will destroy the walk and other features. The walk was developed by Spink Development using funds from Leader and is promoted by Laois Tourism Board.
- Impacts on local water supplies, wells and water schemes.
- Impacts on Freshwater Pearl Mussel, birds and bats.
- Adequacy of road network.
- Impacts on local community who were not consulted about the proposal. Depreciation of property value, shadow flicker, noise, interference with telecommunication services
- Concerns regarding the storage of contaminants. The compound is a long distance from the substation site.
- Landscape impacts associated with removal of hedgerow to accommodate access. Industrial type infrastructure in a rural area.
- Impacts on Recorded Monument (RMP LA030-015) which is an enclosure.

## 7.0 Response to Submissions

On May 14<sup>th</sup>, 2020, the Board requested the applicant to respond to the matters raised in the submissions and observations made in relation to the application.

The response, which was received by the Board on June 18<sup>th</sup>, 2021, is summarised below and IS considered in more detail in the assessment section of this report.

### Response to submission by DAU

- Pre-development test trenching is unwarranted, impacts on the archaeological resource can be mitigated by monitoring.
- The importance of protecting downstream water courses and water quality is recognised and an extensive suit of mitigation measures are proposed and

are detailed in the EIAR. A Water Quality Inspection & Monitoring Plan will be implemented to ensure effective operation of the proposed measures. A dedicated suite of additional water quality protection measures is proposed for Nore Freshwater Pearl Mussel.

- While the Knockardagur stream is habitually/partially dry, it is assessed as providing a hydrological pathway connection to the River Barrow and River Nore SAC.
- While the design process seeks to maximise the separation distance between the stream and the proposed development, due to site constraints it is not possible to achieve a buffer zone of 10m. The mitigation measures proposed are designed to protect water quality and it is not assessed as necessary to impose a defined separation buffer.
- Revised drawings (Annex 1) indicate the placement of in-line silt traps within the drainage ditch to be crossed by the site entrance and additional silt fences and clean water collector drains are proposed to the west of the proposed development.
- Additional design details of the proposed settlements ponds are provided, which will improve robustness. It is not proposed to revise the sizing of any settlement ponds and lagoon at this point as they have been tailored to the specific characteristics of the proposed development site. Should planning permission be granted, the development will be subject to a further detailed design process, which will address the precise location and specifications of surface water management infrastructure.
- An extensive weed management programme is unlikely to be required and measures will relate solely to targeted spot spraying. It is considered that there is no risk to water quality within the Knockardagur stream or further downstream from weed control measures.
- The requirement for real-time data loggers to replace daily inspections of suspended solids in the surface water management system will be fully assessed as to their applicability at the proposed development site having regard to its characteristics. The mitigation and monitoring measures proposed are robust, even in the absence of additional monitoring measures.

- The assertion that the effects of the proposed development on bat species has not been fully assessed is rejected and mitigation measures are proposed to protect potential bat roosts in trees to be removed.
- EirGrid has strict specifications regarding the lighting of the substation compound and the applicant is unable to deviate from these requirements. The proposed development will not be permanently illuminated, and lights will only be switched on during maintenance.
- The cumulative effects of the proposed development in conjunction with the permitted wind farm have been assessed and are detailed in the EIAR.
- The extent of hedgerow removal required is not likely to give rise to significant effects. Insofar as is practicable, the removal of vegetation will be completed in the non-breeding season.

#### Response to submission by Transport Infrastructure Ireland

- The applicant will consult with all local authorities along the proposed delivery routes to obtain all relevant licenses and permits prior to the delivery of abnormal sized or abnormal weight loads.
- Given that the axle loading will remain below 10-tonnes per axle, it is considered that abnormal loads are not proposed and significant adverse effects on the road network are not assessed as likely.
- The proposed haul route for abnormal loads will predominantly comprise motorways and national primary routes. Given the volumes and loadings which these routes are designed to accommodate on a daily basis, there is no realistic likelihood of adverse effects on any structure. An assessment of all structures along motorway and national routes is therefore unnecessary and unwarranted.

#### Response to submission by Geological Survey Ireland

- Reports arising from detailed site investigations to be undertaken prior to commencement of construction will be forwarded to the GSI.
- Following the completion of the construction phase of the development, a report will be produced by the Geotechnical Clerk of Works detailing the



precise geological composition of the site as encountered during investigations, the measures implemented to ensure the appropriate protection and management of the geological environment and details of the treatment of exposed faces, will be submitted to the GSI.

#### Response to submission from the Health Service Executive

- The undertaking of noise monitoring at the selected location represents an extremely conservative and precautionary approach given that background levels at the nearest dwelling, located within an active agricultural setting, are likely to be higher than those recorded at the monitoring location. The assessment indicates that no receptor is likely to experience a significant construction phase noise effect or a noise nuisance.
- Appropriate mechanisms will be put in place to ensure that in the event that a noise complaint is received, it is addressed in an appropriate and timely manner.

#### Response to submission by Laois Co Council

- Revised drawing submitted showing 60m sightlines in each direction at the proposed site entrance (Annex 2). Following the completion of construction, hedgerows will be replaced and sited behind the sightlines. The roadside drain will be piped.
- A revised haul route is submitted which minimises the use of local roads as far as possible (Annex 3).
- Traffic disruption will occur along the local road network but will be minimised by best construction practice measures. The applicant welcomes a condition that a Traffic Management Plan be agreed in writing with the planning authority prior to commencement of development to ensure measures are satisfactorily implemented.
- Annex 4, 5 and 6 of the response includes details of the assessment of the roads infrastructure carried out in respect of the permitted wind farm. The proposed development will likely use identical materials haul routes. Pre and post condition road and structure surveys are proposed, which will ensure that

the applicant makes good any damage to the road network arising from construction.

- Construction traffic will not utilise the junction of the L77951 and L7795 and accordingly there is no requirement to carry out construction works to this junction.

#### Response to submissions by observers

- Many of the issues raised are of limited direct relevance to the proposed development and relate to purported effects arising from the construction and/or operation of the permitted wind farm, which have already been considered by the Board.
- The proposed development will become a 'node' on the national electricity network and it will be for EirGrid to decide whether to continue to operate the proposed substation system following decommissioning of the windfarm. The applicant cannot comment on any future developments that may or may not be progressed by EirGrid.
- The effects of the proposed development on local water resources have been addressed in the EIAR. Mitigation measures are included to protect groundwater.
- No evidence is put forward to support the assertions made that the proposed development would destroy Cooper's Walk or cause damage to local flora and fauna. These matters have been fully and comprehensively assessed in the EIAR.
- The Board has determined that the development constitutes Strategic Infrastructure Development. The development being a 'project' is not subject to Strategic Environmental Assessment.
- Site investigations, comprising trial pits and dynamic probing did not identify any peat or ground stability issues within the proposed development site.
- There is no evidence that developments such as that proposed development will result in depopulation of the local area which would prejudice the sustainability of the local national school. It was assessed that there is no likelihood of significant effects on the health of the local population.

- The landscape and visual impacts of the development have been assessed and effects will not be significant.
- Consideration has been given to the presence of Midlands Heliport, which when considered on its own, or, in combination with the permitted windfarm would not be likely to result in significant effects on aviation.
- The proposed development in conjunction with the permitted windfarm will result in a significant investment in the local community.

## 8.0 Policy Context

### 8.1. National Framework Plan, 2018

The National Planning Framework provides policies, actions and investment to deliver 10 National Strategic Outcomes (NSO) and priorities of the National Development Plan. Transitioning to a low carbon and climate resilient society is the main NSO that pertains to the proposed development. It is stated that new energy systems and transmission grids will be necessary for a more distributed, renewables-focused energy generation system.

Chapter 9 of the NPF: 'Realising Our Sustainable Future' recognises the need to accelerate action on climate change for a low carbon energy future. In this regard, National Policy Objective 54 seeks to *"reduce our carbon footprint by integrating climate action into the planning system in support of national targets for climate policy mitigation and adaptation objectives, as well as targets for greenhouse gas emissions reductions."*

The transition to renewable sources of energy is an integral part of Ireland's climate change strategy as a means of reducing reliance on fossil fuels. Reflecting this, National Policy Objective 55 will *"promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050."*

## 8.2. Eastern & Midlands Regional Spatial & Economic Strategy 2019-2031

The Eastern and Midlands Regional Spatial and Economic Strategy 2019-2031 came into effect on June 28<sup>th</sup>, 2019. Its principal purpose is to support the implementation of the National Planning Framework (NPF) and the economic policies and objectives of Government by providing a long-term strategic planning and economic framework for the development of the region. It seeks to determine at a regional scale how best to achieve the shared goals set out in the National Strategic Outcomes of the NPF and sets out 16 no. Regional Strategic Objectives which set the framework for city and county development plans.

Section 10.3 is devoted to Energy. It states:

*‘A secure and resilient supply of energy is critical to a well-functioning region, being relied upon for heating, cooling, and to fuel transport, power industry and generate electricity. With projected increases in population and economic growth, the demand for energy is set to increase in the coming years.’*

It is recognised that there is an over-reliance on non-indigenous supplies of energy and that there is a need to better leverage natural resources to increase the share of renewable energy.

## 8.3. Laois County Development Plan 2017-2023

Laois Co. Council seeks to develop the county as a low carbon economy by making provision for the harnessing, storage and use of renewable energy (Section 6.6 of the Plan). The county is considered to be well placed to encourage and facilitate the development of power generation facilities, mainly because of the county’s proximity to Dublin and the passage of a number of gas mains and trunk elements of the national grid through or in very close proximity the county. The Plan contains a number of objectives/policies which seeks to promote and facilitate renewable energy development, including wind. Appendix 5 of the Plan contains the Wind Energy Strategy.

#### **8.4. Climate Action Plan, 2019**

This plan puts in place a decarbonisation pathway to 2030 consistent with reaching the EU target of net zero emissions by 2050. It builds on the measures set out in the National Mitigation Plan, Project Ireland 2020 and the draft National Energy and Climate Plan.

It is noted that electricity accounted for 19.3% of Ireland's greenhouse gas emission in 2017; however, 30.1% of electricity produced in 2017 was from renewable sources. The target is to reach 40% by 2020 but there is a very rapid projected growth in electricity demand. The Climate Action Plan therefore seeks to ensure that renewable rather than fossil fuel generation capacity is built to meet this demand. The aim is to have 70% of electricity generated from renewable sources by 2030. The Climate Action Plan acknowledges that increased levels of renewable generation will require very substantial new infrastructure including wind and solar farms, grid reinforcement, storage development and interconnection.

#### **8.5. National Adaption Framework, 2018**

The Framework was developed under the Climate Action and Low Carbon Development Act, 2015. A number of Government Departments are required under this Framework to prepare sectorial adaptation plans to reduce the vulnerability of the country to the negative effects of climate change and to avail of the positive impacts. The Climate Change Adaptation Plan for Electricity and Gas Networks Sector has been published under the National Adaption Framework to identify the potential impacts of climate change on energy infrastructure, assess associated risks and set out an action plan for adapting to those impacts.

#### **8.6. Natural Heritage Designations**

The site drains to the Knockardagur stream and to the Owenbeg River which is part of the River Barrow and River Nore SAC. Other Natura 2000 sites include Lisbigney Bog SAC c 5.7km to the south-west and the River Nore SPA c 5.7 km west of the site. Lisbigney Bog pNHA lies c 5.9 km south-west of the site.

## 9.0 Planning Assessment

Having regard to the requirements of the Planning and Development Act, 2000 (as amended), this assessment is divided into three main parts, the planning assessment, environmental impact assessment and appropriate assessment. In each assessment, where necessary, reference is made to issues raised by all parties. There is an inevitable overlap between the assessments, for example, with matters raised falling within both the planning assessment and the environmental impact assessment. In the interest of brevity, matters are not repeated but such overlaps are indicated in subsequent sections of the report.

I have examined the file and the planning history, considered national, regional and local policy and I have inspected the site and its surrounds. I have assessed the proposed development and considered the various submissions received from the applicant, the planning authority, prescribed bodies and observers. I consider that the key issues arising for determination by the Board in respect of the planning assessment include the following:

- The principle of the development
- Landscape and visual impacts
- Roads and traffic
- Impact on residential and local amenities
- Other matters

### 9.1. The principle of the development

In terms of tackling climate change, reducing dependency on fossil fuels in energy production and achieving reduced greenhouse gas emissions, there is clear policy support at international, national and local level for renewable energy development.

Whilst significant progress has been made, Ireland did not meet its 2020 renewable energy targets. The overall share of renewables stood at 12% which was below the

country's EU binding target of 16%. The share of renewable electricity (RES-E) was c 36.5 % and Ireland has a national target of 40%.<sup>1</sup>

Ireland is also set to fall short of its carbon emission reduction targets for 2030 (EPA, June 2019). The country, therefore, faces significant challenges in meeting the stringent targets set by the Government including a renewable electricity target of 70% by 2030 and more ambitious targets for greenhouse gas emission reductions.

Government policies identify the development of renewable energy as a primary contributor in implementing Ireland's climate change strategy and national energy policy. The crucial role of wind energy in electricity production is recognised at national level in the various plans and strategies published by Government including the 'National Renewable Energy Action Plan', 'Ireland's Transition to a Low Carbon Future', 'Strategy for Renewable Energy 2012-2020', 'Climate Action Plan' and the 'National Planning Framework'.

It is acknowledged that wind energy has been the largest driver of growth in renewable electricity in the country and will continue to be the main contributor going forward. Significant increases in installed capacity will be required to meet mandatory targets. The proposed substation and grid connection will facilitate the development of the permitted Pinewood Windfarm, delivering an additional renewable energy source and contributing to an overarching aim of the Climate Action Plan of tackling climate breakdown by reducing greenhouse gases. It will drive continued progress towards a low carbon economy, reduce dependence on fossil fuels, and the decarbonisation of the electricity sector, in line with European/national climate change strategies and energy policies.

An increase in the amount of renewable energy is also supported at regional and county level through the Eastern and Midlands Spatial and Economic Strategy and the Laois County Development Plan. Both emphasise the importance of energy to economic activity, the necessity to reduce dependence on fossil fuels in energy production and to increase the quantity of energy from renewables, including wind. The proposal is, therefore, consistent with regional and local policy.

The proposed development will facilitate the construction of the consented Pinewood Windfarm, which when operational will export renewable energy to the national grid

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<sup>1</sup> SEAI Energy in Ireland 2020 Report

via the proposed grid connection. I consider that the proposed development is, therefore, acceptable in principle in this location.

## 9.2. Landscape and Visual Impact

Under the provisions of the county development plan, the site is located in Landscape Character Area LCT 1 'Hills and Upland Areas' which are noted to be a prominent feature of the county, from where panoramic views of the lowland areas of county Laois and adjacent counties are available. The development plan does not provide a sensitivity analysis for the 7 no. landscape character types in the county but states (section 7.19) *that 'sensitive areas include upland areas, visually open and expansive areas in the vicinity of natural heritage or built heritage assets or scenic views'*.

In terms of capacity to accommodate change the Landscape Character Assessment states that the impact of developments such as overhead cables, substations and communications masts on landscape character *'is a factor of their visual prominence, size and scale as well as their location in sensitive landscapes such as archaeological sites or areas within scenic vistas. The convergence of a number of overhead cables or the massing of a large substation or number of masts will adversely affect landscape character depending on the state of the landscape in question'*.

The Zone of Theoretical Visibility (ZTV) mapping provided by the applicant shows the extent of theoretical visibility within a 2 km radius of the site. It indicates that the proposed development will not be visible from large areas in the northern, eastern and southern portions of the study area. Views towards the site from these areas are constrained by the edge of the Castlecomer Plateau and the undulating nature of the intervening landscape.

The ZTV mapping was used to select viewpoint locations for the assessment of the proposed development. A total of 5 no. photomontages were produced from locations along the local road network in the vicinity of the site. The photomontages show the existing view pre and post development, the effect of proposed mitigation measures and the overall cumulative effect taken in conjunction with permitted developments in the locality (Laois- Kilkenny Grid Reinforcement Project, Pinewood



Wind Farm). The viewpoints are classified in terms of the significance of visual impact ranging from 'Moderate-Slight' to 'Imperceptible'.

Viewpoint 1 is located along the local road to the south of the site, which is part of Cooper's Hill Walk. The view is of sloping agricultural land against a backdrop of trees/hedgerows, with the Slieve Bloom mountains visible in the distance. Views from this location are intermittent and blocked by roadside hedgerows. While much of the proposed development would be visible in the view, the impact would be highly localised and mitigated by the retention of existing hedgerows along the southern and western boundaries. The planting of new hedgerows along the northern and eastern boundaries and the proposal to encourage natural revegetation of the cut faces, will also facilitate the assimilation of the development into its surroundings.

The substation buildings will be low profile structures and are capable of being effectively absorbed into the landscape. The tower structures will project above the treeline and together with the permitted 110 kV power lines will intrude in the view. However, the impact is not considered to be significant having regard to the design of the towers (lattice towers) and the intermittent and localised nature of the view. The significance of visual impact is assessed in the EIAR as 'Moderate-Slight', which is considered reasonable.

Viewpoint 2 is from a point further east along the local road to the south of the site. The view is taken from an elevated viewing platform positioned above hedgerow level along the walking trail. From here there are expansive long-distance views over the surrounding countryside. The proposed development will encroach into the view but will be mitigated to a degree by the spilt level design of the substation and the landscaping proposals. Similar views are not available from road level due to the presence of substantial and high roadside vegetation. I accept that the visual impact of the development from the local road will not be significant.

Viewpoint 3 is located further west on the local road to the south of the site. The proposed development is located on the lower slopes and well below the ridgeline. There is a mature treeline in the middle ground. There is potential for intermittent visibility, particularly during the winter months when trees/hedgerows carry no foliage. The proposed development will not be unduly dominant and taken in

conjunction with the permitted windfarm turbines will not result in significant effects on the character of the landscape or the visual amenities of the area. I accept the conclusions reached in the EIAR that the visual impact from this location will not be significant.

Viewpoint 4 is located on the local road to the west of the site c 2km from the site. The development is located below the ridge line with a band of woodland in the foreground. The development will be visible in the view but will not be unduly dominant, particularly when taken in combination with the proposed turbines associated with the permitted Pinewood Wind farm which will travel along the ridge line. I accept that the substation buildings can be effectively assimilated into the landscape and that the visibility of the taller tower elements will be mitigated by the design of the towers and by distance.

Viewpoint 5 is from a local road to the north-west of the site which is also part of the lopped walking route. The site will be visible in the distance on sloped ground below the ridge line. Views will be intermittent due to the presence of high roadside hedgerows and intervening vegetation. The proposed development will be barely discernible in this view and I accept the conclusions reached that the impact will not be significant.

### **Conclusions on Landscape and Visual Impact**

I inspected the site and its surroundings from the adjacent road network and have had regard to the relevant chapters of the EIAR and the supporting appendices. I have visited the viewpoint locations and examined the photomontages submitted, which I consider are sufficiently representative of views in the area and adequate for the purposes of the assessment.

The proposed development will introduce a large industrial type complex into an area of rural landscape. While the landscape is generally unspoilt and supports agricultural buildings and houses at lower elevations, it is not particularly remarkable in terms of scenic qualities. There are no sensitive landscape features, protected views or important stands of trees in the area, that are considered to warrant protection in the development plan.

I accept that the proposed development can be accommodated on the site without resulting in significant effects on the landscape or visual amenities of the area. I

accept that the impacts are likely to be more significant during the construction stage associated with the disturbance of landform/land cover, excavation, earthworks and general construction activity. However, these impacts will be temporary in nature and short term.

Once operational the substation will become a permanent feature of the landscape. Landscaping measures are incorporated into the design which will screen the site and mitigate potential impacts. I would note that the Board has already determined that the receiving landscape is sufficiently robust to accommodate more visually significant infrastructural developments including the 110 kV Laois -Kilkenny Reinforcement Project and the 11 no.turbine Pinewood Wind Farm. I would also note that the planning authority have concluded in their submission that the proposed development would not give rise to significant landscape or visual effects.

I accept the conclusions reached in the EIAR that the proposed development can be accommodated and is capable of effectively assimilated into the landscape without resulting in significant adverse impacts on the landscape and visual amenities of the area. The proposed development will not negatively impact on any designated landscape, scenic view or designated scenic routes. The visual impact that does arise will be highly localised, intermittent in nature and constrained by landform and vegetation.

### **9.3. Roads and Traffic**

Issues have been raised by the planning authority regarding the adequacy of the road network in the area and its ability to accommodate the construction stage of the development.

The site is accessed from the R 430 and thereafter by a series of local roads, which have narrow carriageways and poor horizontal and vertical alignment. The pavement condition of sections of the local road to the south is poor and there is limited visibility at the junction on its western end. It is proposed to construct a new site access from this road to access the proposed substation.

While it is intended that the national and regional road network will be used as the main haul route, it will be necessary to use the local road network on the final approaches to the site. The haul routes are broadly similar to those proposed for the

permitted wind farm, which included a substation on the subject site. (Annex 3 of the further information makes minor adjustments to the proposed haul route).

Similar issues regarding the adequacy of the local road network were raised by the planning authority with respect to the wind farm application. A substantial amount of further information was provided on the wind farm application, which included detailed falling weight deflectometer tests, a road safety audit, road reconstruction proposals, a traffic impact assessment and preliminary traffic management plan. The Board in its determination of the application concluded that the road network in the area was adequate to accommodate the development.

The applicant notes the provisions of Condition No 13(a) of the permitted Pinewood Wind Farm (PL 11.248518), which requires pre and post road and structure surveys to be undertaken on the haul route and that any damage associated with the proposed development be made good in accordance with the requirements and to the satisfaction of the Planning authority. The applicant welcomes the imposition of a similar condition in this case, which would ensure that any deterioration in the road network arising from the proposed development would be addressed. This is standard practice in relation to large development with the potential to impact on the condition of the road network.

The applicant has addressed the issues raised by the planning authority regarding the proposed site access. The revised drawing submitted in response to further information indicates that it is possible to achieve the required visibility splays of 60m in each direction in accordance with the requirements of the planning authority and without encroachment onto third party lands.

I consider that the matters raised by the TII regarding the transport of abnormal loads and assessment of structures along haul routes has been addressed satisfactorily by the applicant.

### **Conclusion on Roads and Traffic**

I accept that the main impacts on the road network will be associated with the construction stage, which will result in a significant increase in traffic movements on the local road network. There is potential for damage to road pavements and increased journey times and inconvenience from construction activity and deliveries to the site. These impacts will be short term and temporary and capable of effective

mitigation through the implementation of a traffic management plan that will include measures to maximise road safety and movement. Once operational, the traffic associated with the substation will be occasional, associated with routine maintenance and will not be significant.

Subject to the implementation of the best practice mitigation measures detailed in the application, I accept that the proposed development will not significantly impact on roads and traffic.

#### **9.4. Impact on residential and local amenities**

Concerns have been expressed about the potential impacts of the proposed development on the amenity of Copper Hill Walk used by the local community. The walk forms a loop extending from Chapel Cross on the R430, south along the L7800 before turning east along the local road to the south of the site. The walk continues westwards towards Dysartgallen Church before turning north and east returning to the crossroads. The track is along quiet low trafficked rural roads.

During the construction stage, materials will be delivered to the site using some of the local roads that form part of the lopped walk. While the applicant has committed to maintaining the walk accessible to the local community, I accept that this phase of the development will cause a level of disruption, inconvenience, and discomfort to those wishing to use the walk. The construction phase may also discourage walkers from using the trail. However, these effects this will be temporary and short term and limited to the hours of construction. I accept that the implementation of appropriate traffic management measures in agreement with the planning authority will help to mitigate these impacts.

While some changes will occur along the walkway to facilitate access to the both the proposed site and the associated wind farm, it is a condition of the permitted wind farm (Condition No 13 (a) PL11.248518) that any damage to the materials haul routes will be made good, which will ensure that the structural integrity and condition of the walkway will be maintained. I do not consider that the changes proposed will overly impact on the rural nature of the surroundings such that the looped walk would not be maintained as an attractive amenity for use both by the local community or significantly alter the visitor experience to the area.

The residential property closest to the site is located to the northeast (landowner). There are other single dwellings located to the southeast. The main impacts on these properties will occur during the construction stage associated with noise, increased traffic and visual effects. These impacts will be temporary and short term and subject to the mitigation measures proposed will not result in significant effects. Following completion, the substation will generate limited noise and there will be only occasional traffic associated with the maintenance of the facility.

The proposed development will not cause shadow flicker effects, which would act in combination with the permitted windfarm to impact on the residential amenity of nearby properties and having regard to the separation distance to dwellings, no depreciation in property value is likely to arise.

No long-term negative impacts on residential amenities are therefore predicted and I do not consider that the proposed development will adversely impact on population sustainability, or the residential amenities of the area as contended in the submissions.

### **Conclusion on residential and local amenities**

Subject to the mitigation measures proposed during construction which are standard best practice, no significant effects are predicted. Following the completion of the proposed development there will be no significant adverse effects on residential or local amenities.

## **9.5. Other Matters**

I would point out to the Board that many of the issues raised by the observers relate predominantly to the permitted wind farm. These matters have been duly considered by the Board in its determination of that application and will only be revisited as relevant in this assessment. I would also note that leave to appeal the Board's decision was refused by the High Court [2019\_768 JR Brophy & Anor. v An Bord Pleanala & Ors].

The submissions by Ballypickas GAA and Knock National School raise issues regarding potential depopulation and impacts on the club and existing/future generations of the school community. Other matters raised relate to impacts on the health, safety and welfare of the local population and children attending the school.

The substation is at a significant remove from both the school and the GAA club (locations shown in Annex 4.1 of Volume 11) and neither will be negatively impacted by the proposed development. The likely effects of the proposed development on local communities, including in combination effects with the permitted wind farm development, have been adequately and appropriately assessed in the EIAR submitted with the application.

RTS community group refer to ECJ Judgement C24/19 which is relevant to wind farms. They also refer to the need for Strategic Environmental Assessment (SEA) for the entire project. The entire project has been subject to EIA and is not subject to SEA which relates specifically to 'plans and programmes'.

Kevin Brophy on behalf of concerned residents of Spink refers to a lack of public consultation in respect of the proposed development. It is acknowledged in the EIAR (Section 1.10.4) that for the most part, consultation was undertaken as part of the Pinewoods Wind Farm application, which included a proposal for a substation of substantially the same scale, on the subject site. The applicant states that the concerns raised by residents in previous submissions have all been taken into account as they relate to the subject site.

I note that the public consultation process conducted in respect of the permitted windfarm included one-to-one discussions with local residents located within 2 km of the wind farm, in addition to public meetings with the local community. The local community had an opportunity to engage with both the planning authority and the Board during the processing of the original application and also with the Board in relation to the current application. I accept that the approach adopted by the applicant has been reasonable and the right of the public to participate has not been compromised.

## **10.0 Environmental Impact Assessment**

### **10.1. Introduction**

Schedule 5 of the Planning and Development Regulations, 2001, as amended sets out the classes of development which, where they comprise a certain class of development, or exceed certain thresholds are subject to mandatory EIA. The

proposed development comprising an electricity substation is not, of itself, a class of development listed in Schedule 5 as requiring EIA.

The proposed substation was previously included in the planning application and EIS for the permitted Pinewood Wind Farm (PL11.248518). While the Board granted permission on appeal for the windfarm and concluded that it would not result in significant effects on the environment, it specifically excluded permission for the substation, on the grounds that it constituted strategic infrastructure development.

The proposed development forms part of an overall development which has been subject to EIA. It connects to the permitted 110kV Laois-Kilkenny Reinforcement Project electricity line, which was also subject to the EIA. The EIAR is submitted to allow the Board to undertake an EIA of the complete project and in combination with other permitted projects. The approach accords with O’Grianna & Ors. V An Bord Pleanala which determined that a wind farm development, to which the EIA Directive applies, and its connection to the national grid are considered as one project for the purpose of EIA.

The EIAR comprises three volumes as follows:

Volume 1: Main text

Volume 11: Annexes.

Volume 111: Comprises the EIS/EIAR prepared in respect of the permitted Pinewoods Wind Farm.

## 10.2. **Compliance with legislation**

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 Directive, which include:

- (a) population and human health;
- (b) biodiversity, with particular attention to the species and habitats protected under Directive 92/43EEC and Directive 2009/147/EC;
- (c) land, soil, water, air and climate;
- (d) material assets, cultural heritage and the landscape;



(e) the interaction between the factors referred to in points (a) to (d).

The environmental factors listed in Article 3(1) of the Directive are discussed in Chapter 4 to Chapter 13 of the EIAR. Chapter 1 provides an introduction and details of consultations and the project team. The alternatives considered by the applicant are discussed in Chapter 2 and a description of the development is provided in Chapter 3. Interactions are described in Chapter 14.

Article 3(2) of the Directive requires the consideration of effects deriving from the vulnerability of the projects to risks of major accidents and/or disasters that are relevant to the project concerned. The possible natural disasters that could occur are identified as flooding and fire. This is addressed in Chapter 5 (Population and Human Health).

The EIAR complies with Article 5 of the Directive and Schedule 6 of the Planning and Development Regulations 2001, as amended. It provides a comprehensive description of the project comprising information on the site, design, size and other relevant features of the project (Chapter 3). It describes the likely significant effects of the project on the relevant environmental media (Chapters 4 -13) and it provides a description of the measures envisaged in order to avoid, prevent or reduce and, if possible offset likely significant effects on the environment.

The Directive requires that the description of likely significant effects should also include an assessment of cumulative impacts that may arise from the proposed development in combination with other plans or projects. Section 1.11 of the EIAR sets out the methodology for the cumulative assessment and details of other projects considered. Cumulative effects are also considered under the various environmental factors in the individual chapters of the EIAR.

The EIAR includes a Non-Technical Summary of the information referred to in Article 5 (a) to (d) and additional information specified in Annex IV. It provides an adequate description of the forecasting measures used to identify and assess the significant effects on the environment. The Non-Technical Summary is concise and comprehensive and is written in a language that can easily be understood by a lay member of the public.

In compliance with the provisions of Article 5(3), the EIAR tabulates the inputs and qualifications of the study team and contributors under Section 1.8.2. I am satisfied

that the EIAR has been prepared by competent experts to ensure its completeness and quality.

Details of the consultations entered into by the applicant as part of the application are set out in Table 1-3 in Chapter 1. As noted, consultation with the public was to a large part undertaken as part of the permitted wind farm development which included a substation on the subject site. I am satisfied that the participation of the public has been effective, and the application has been accessible to the public by electronic and hard copy means with adequate times afforded for submissions in accordance with the requirements of Article 6 of the Directive.

I note that no technical difficulties were encountered in the preparation of the EIAR (Section 1.17). 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.

I am satisfied that the information provided in the EIAR is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effects of the project on the environment, taking into account current knowledge and methods of assessment.

### 10.3. Reasonable Alternatives

It is a requirement of the EIAR process that a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, as well as an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment.

The reasonable alternatives considered by the applicant includes alternative grid connections, alternative substation locations, and alternative substation design technologies. The 'Do Nothing' alternative was not considered as a reasonable option by the applicant on the basis that a substation is required to connect the permitted Pinewoods Wind Farm to the national electricity grid.

In terms of grid connections, 3 no. alternatives were considered. These included an underground connection along the public road to an existing substation at Ballyragget southwest of the windfarm (G1), an option to connect into the permitted and adjacent Laois-Kilkenny Reinforcement transmission line via a loop in/loop out

substation to the west of the site (G2), or to connect via an underground cable to the permitted Coolnabracky substation to the north of the windfarm (G3). Maps showing the locations of these options are provided in Chapter 2 of the EIAR.

Table 2.1 of the EIAR provides an assessment of these options under the various environmental factors. Option G2 emerged as the preferred option due to the close proximity of the permitted Laois-Kilkenny Reinforcement Project transmission line, which passes immediately adjacent to the permitted Pinewoods Wind Farm. While this option would include towers and transmission line with the potential to create landscape and visual effects, the other options would involve excavation of trenches along public roads over a considerable distance to accommodate an underground cable, crossing of watercourses, interaction with a number of heritage features located along the route and potential road closures and diversions.

While no significant effects on the environment are predicted with any of the options, the proposed development consisting of a loop in/loop substation in close proximity to the permitted 100kV transmission line would result in less potential for environmental effects, in particular on land & soil, water, cultural heritage and materials assets (transport and access). The landscape in the area of the site is not protected, there are no scenic views in the area and visual impacts are highly localised. The rationale for the chosen option is, therefore, considered reasonable.

Having regard to the fixed position of the permitted wind farm vis-a-vis the permitted Laois-Kilkenny 110kV Reinforcement Project electricity transmission line, alternative substation locations from that originally planned as part of the overall Pinewood Wind Farm were not considered. This is considered reasonable.

In terms of alternative substation design technologies, it is noted in the EIAR that within Eirgrid specifications for 110 kV substations, there are two approved designs. These are air-insulated or gas-insulated switchgear substations. Both options are stated to be technically feasible and neither is evaluated as likely to result in significant environmental effects. The main advantage with the air-insulated option is that it has greater flexibility and an increased range of options for future development than the gas-insulated design. This was considered to outweigh the minor reduction in environmental effects which would arise from the development of a gas insulated switchgear substation (smaller footprint).

## **Conclusion**

The EIAR provides a description of the reasonable alternatives considered by the applicant, which are relevant to the proposed development and its specific characteristics. I consider that the Board has before it adequate information on the alternatives considered. I consider that the applicant has provided a reasoned basis for the option chosen, having regard to environmental effects and has therefore complied with the requirements of Article IV (2) of the amending Directive.

### **10.4. Likely Significant Effects on the Environment**

This section of the report considers the direct and indirect significant effects of the development against the factors set out under Article 3(1) of the EIA Directive, which include:

- (a) Population and human health,
- (b) Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC,
- (c) Land, soil, water, air and climate,
- (d) Material assets, cultural heritage and the landscape, and
- (e) The interaction between the factors referred to in points (a) to (d).

The headings used in the EIAR to address each of the environmental factors are as follows:

- Population and Human Health
- Biodiversity
- Lands & Soils
- Water
- Air Quality and Climate
- Landscape
- Cultural Heritage
- Noise & Vibration

- Shadow Flicker
- Material Assets
- Interactions

The direct, indirect and cumulative effects of the project on the specified factors is identified, described and assessed in the following sections. I would point out to the Board that it is not anticipated that decommissioning of the substation will occur as it will form part of the national transmission network and likely to continue following the decommissioning of the wind farm after its 25-year operational period.

## 10.5. Population and Human Health

### **Introduction**

Chapter 4 of the EIAR assesses the likely significant effects of the proposed development on population and human health, with particular reference to economic activity, social considerations and health and safety. As the proposed development forms part of the overall Pinewoods Wind Farm (PWF) project, the cumulative effects of the development in combination with the permitted windfarm and other existing, permitted and proposed developments are assessed.

### **EIAR summary**

The EIAR provides details of the Electoral Divisions (ED) within 5km of the site and their respective populations according to the Census 2016. The populations are typical of a rural area, with marginally higher populations in those ED's that contain small urban centres (Clogh and Ballinakill). Residential properties outside settlements are either single houses or scattered linear development. Settlements include Ballinakill on the R432 and Clogh to the east on the R426. The towns of Abbeyleix and Durrow to the west provide a wider range of facilities and services.

The study area is located on the lower northern slopes of the Castlecomer Plateau, known locally as Cooper's Hill. The dominant land use in the vicinity of the site is agriculture with some coniferous forestry and transitional woodland scrub. Local roads and tracks provide a circular walking route (Cooper's Hill Walk). There are other walking/cycling routes including the Slieve Margy Way, which passes through Swan to the east.

Other tourism attractions in the area include Heywood Demesne, which is maintained by the OPW and Mount Nugent Stud located at Ironmills to the east of Ballinakill. A map showing the locations of identified local features is provided in Annex 4.1 (Volume 11).

### **Description of Likely Effects**

The EIAR describes the potential likely effects for the construction, operational and decommissioning phases of the development in terms of population sustainability/residential amenity, general amenity/wellbeing, economic effects/employment, tourism economy and accidents/natural disasters, which is summarised below.

### **Predicted impacts during construction**

#### *Population sustainability and residential amenity*

- Noise associated with construction works and traffic.
- Increased HGV and LGV traffic

#### *General Amenity and Well-Being*

- Construction works will be temporary in nature (15-18 months).
- Works will only occur during daytime hours and not on Sundays or Bank Holidays
- Works will occur on private lands and no rights-of-way will be affected.
- Temporary visual effects during construction.
- Traffic movements through small communities.
- Haul route will interact with Cooper's Hill Walk

#### *Economic Effects and Employment*

- Capital expenditure on site preparation, purchase and delivery of materials, plant, equipment and other components.
- C.100 workers will be employed during the construction phase.
- Procurement of goods and services locally.

#### *Effects on Tourism Economy*

- Enhanced level of occupancy for accommodation providers.

- Increased business will allow businesses to invest in improvements leading to long term enhancement.

#### *Accidents or Natural Disasters*

- Likelihood of significant natural disaster occurring on the site is low and would be limited to flooding and fire. Risk of flooding is assessed as negligible, and risk of fire is limited as the site will be operated to the highest standard.
- No significant sources of pollution associated with the proposed development with the likelihood of causing significant environmental or health effects.
- The proposed development site is not regulated by, connected with, or proximate to any site regulated under the Control of Major Accident Hazards Involving Dangerous Substances Regulations (SEVESO) and there is no likelihood of cumulative effects or interactions with any such site.

#### *Cumulative Effects*

The assessment has taken into account the likely cumulative effect of the proposed development with the permitted Pinewood Wind Farm, the Laois- Kilkenny Grid Reinforcement Project and other permitted or proposed developments (Table 1.4 of the EIAR). It is likely that cumulative effects would arise in relation to the construction of other proposed or permitted development should the construction phase overlap with the proposed development. Given the temporary nature of the construction phase, it is assessed that none of these projects are likely to result in significant cumulative beneficial or adverse socio-economic or population and human health effects.

### **Predicted impacts during operational**

#### *Population sustainability and residential amenity*

- Area characterised by low population density.
- No likely significant effects have been identified in respect of water, air & climate, landscape, or noise which could adversely affect the sustainability of the population or residential amenity.

#### *General Amenity and Well-Being*

- Development will be of slight negative significance in the context of the low level of local amenity activity.
- Noise levels sufficient to cause noise induced hearing damage or sleep disturbance are not likely to occur.
- Grid connection cables will comply with ICNRP international guidance for ELF-EMF.
- Electrical equipment and apparatus will be located a substantial distance from residences with no possible EMF impact. The substation when operational will also comply with ICNIRP and EU guidelines relating to exposure to EMF.

#### *Economic Effects & Employment*

- Further employment is anticipated to provide operational support.
- Indirect employment effects arising from placing of contracts with other businesses (site and building maintenance, waste management, site maintenance).

#### *Effects on Tourism Economy*

- Proposed development will not give rise to significant landscape and visual impacts.
- No evidence that the proposed development, in conjunction with the permitted wind farm will adversely affect the visitor experience of the area.
- Occasional views of the proposed development are not likely to act as a deterrent to visitors or discourage repeat visits to the area.

#### *Cumulative Effects*

- The proposed development taken in conjunction with other existing/permitted development in the vicinity is not likely to result in significant cumulative positive or adverse socio-economic or population and human health effects in combination with any of these projects.
- A community benefit fund in accordance with the Irish Wind Energy Association and will be available at a rate of €2 per MWh produced.



- A €500 annual contribution towards the energy/electricity costs of all non-involved dwellings located within 1,030m of a permitted turbine.

### **Predicted impacts during decommissioning**

The proposed development will form part of the national electricity network and decommission of the substation is not proposed.

### **Mitigation**

No specific mitigation measures have been identified in respect of socio-economic receptors arising from the construction or operation of the proposed development and therefore no mitigation measures are required to reduce or remedy any effect.

No significant residual construction or operational residual effects are likely to occur.

### **EIAR conclusion**

Any adverse effects of the proposed development on population and human health are assessed as likely to be insignificant. No specific mitigation measures, other than full adherence to all health and public safety are identified as required. Positive effects on population and human health will arise from the proposed development in conjunction with the permitted Pinewood Wind Farm arising from a major investment in the local economy and the generation of employment both during the construction and operation stages of the development.

### **Assessment**

The development site is located in an area of low population density and at a remove from local centres of population and community facilities. The permitted wind farm will be located to the southeast and the permitted grid reinforcement project will be located immediately adjacent to the west. I accept that the majority of effects on population and human health are likely to occur during the construction stage of the development, associated with increased traffic, noise, visual effects and impacts on local amenities. These impacts will be temporary and of relatively short duration as discussed above under the Planning Assessment (Section 9.0).

I accept the conclusions reached in the EIAR that the effects are not likely to be significant and will be mitigated by the implementation of standard best construction practices. There will be slight positive effects on population arising from increased employment and knock-on benefits to the local economy.

I am satisfied that the impacts identified on population and human health would be avoided, managed or mitigated by the measures forming part of the proposed scheme. I am, therefore, satisfied that the proposed development would not have any direct, indirect or cumulative significant effects on population and human health. I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on population and human health to be fully assessed by the Board.

## 10.6. **Biodiversity**

### **Introduction**

Chapter 5 of the EIAR assesses the potential significant effects of the proposed development on biodiversity of the area. This chapter is supported by Annex 5.1 to 5.3 in Volume 11 and by the AA Screening Report and Natura Impact Statement.

### **EIAR summary**

A desk top study of the site and the zone of influence of the proposed development was conducted to establish baseline ecological conditions using recognised data bases, satellite imagery and aerial photography. A walkover survey was conducted on April 22<sup>nd</sup> and habitats were identified and classified (Fossitt, 2000). The habitats present were identified for their potential to support protected flora and fauna including foraging, roosting and commuting bats. Incidental sightings or evidence of birds, mammals or amphibians, or suitable habitat to support these species was also noted.

The EIAR provides details of designated sites (SAC, SPA, NHA/pNHA's) close to the site. The site is connected to the River Barrow and River Nore SAC via the Knockardagur Stream which drains into the Owenbeg River. The likelihood of significant effects on Natura 2000 sites is addressed in the AA Screening Report and NIS, which supports the application. There are no NHA/pNHA within the zone of influence of the proposed development and there is no likelihood of impacts on NHA/pNHA given the localised nature of any likely impacts and the distance between the site and the NHA/pNHA's.

The dominant habitat within the site is improved grassland which is used for cattle grazing. The habitat is described as species poor and commonly occurring

throughout Ireland. It is evaluated as not important. There are hedgerows present along the western and southern boundaries and along the Knockardagur stream, bisecting the site from east to west. Hedgerows within the site are associated with dry drainage ditches. These are evaluated as important at the Local level and provide ecological connectivity between the site and the surrounding landscape.

The Knockardagur stream rises c. 10m south of the substation footprint and flows in a westerly direction. During the field survey water levels were very low and the stream is only likely to contain flow following rainfall events. The stream provides connectivity with the River Barrow and River Nore SAC via the Owenbeg River. This habitat is evaluated as important at the Local level.

Regarding species, the NBDC database indicated records for Little Egrit within the 2km grid square within which the site is located. Little Egrit is listed on Annex I of the Birds Directive and is green-listed on BoCCI. There was no evidence of the species during the site survey. No other rare or protected species were recorded during the field survey and the habitats present on the site are not likely to support protected species. No evidence of amphibians was recorded and no suitable habitat suitable for breeding amphibians was noted. Drainage ditches and the stream were dry, offering no suitable habitat. All bird species recorded are commonly occurring and widespread in Ireland.

Potential roost features that may be used by bats were noted in mature ash trees within the hedgerow immediately south of the footprint of the proposed substation. The roost features were inspected from ground level and were assessed as of moderate suitability for roosting bats. Hedgerows within the site are considered to be moderately suitable for foraging and commuting bats. The bat population using the site is evaluated as important at the Local level.

There was no evidence of Otter and the streams and drainage ditches within the site do not provide suitable habitat. There was no evidence of badger and due to the intensively farmed nature of the site, it is unlikely to be used by other mammals for breeding.

There are no records of invasive species on the site and none were recorded during the site survey.

The main ecological features identified as important from the baseline assessment of the site and within the zone of influence of the proposed development include Natura 2000 sites, the Knockardagur stream, hedgerows and bats. The EIAR details the predicted impacts on these ecological receptors during each phase of the development which are summarised below. The potential for adverse impacts on the River Barrow and River Nore SAC is discussed in more detail below under Appropriate Assessment (Section 11.0).

### **Predicted impacts during construction**

- Impacts on Knockardagur stream and the SAC from contaminated discharges to watercourses with the potential to cause negative effects through the deterioration of water quality, increase in suspended solids, changes in water chemistry and reduction in habitat.
- Impacts on flow regime in Knockardagur stream.
- Hedgerow removal to facilitate the construction of the access track and the site entrance to the south of the site.
- Impacts on bats associated with the removal of hedgerow and trees.

### **Predicted impacts during operation**

- Stormwater discharges to Knockardagur stream and SAC.
- Hydrocarbon/chemical spillages.
- Impacts of artificial lighting on bats.

### **Predicted impacts during decommissioning**

The substation will form part of the national electricity network and will not be decommissioned. No effects will occur.

### **Mitigation measures**

A suite of standard best practice mitigation measures to protect water quality in the Knockardagur stream are outlined in the EIAR. These are discussed in more detail below under section 10.8 (Water) of this report. The measures are incorporated into the Surface Water Management Plan and the detailed drainage design for the site. The measures are designed to prevent sediment release and other pollutants to surface water features during construction. The surface water drainage

infrastructure is designed to prevent any changes to the flow regime within the stream and discharges will be limited to greenfield run-off rates and volumes. This will prevent scouring and allow settlement of sediment to occur. Surface water protection measures will be implemented to avoid effects from hydrocarbon/chemical spillage during the operational phase.

The loss of small sections of hedgerow during the construction phase will be mitigated by additional planting. Hedgerows that are to be retained will be protected during construction and new hedgerow will be planted along the top of the embankment along the northern and eastern boundaries of the proposed substation. The hedgerows will be managed post construction to maintain a height of 3-4m.

Trees with potential bat roost features will be marked and checked for signs of use by bats at pre-construction stage. The trees will be inspected by a suitably qualified and experienced ecologist. Where a tree is to be removed which has a roost site, a derogation licence will be obtained from NPWS. Following construction, the hedgerow planting will provide replacement foraging and commuting habitat for bats. Artificial lighting for the development will only be used when maintenance personnel are present at night and will be designed to avoid light spill.

### **Cumulative effects**

The EIAR concludes that the proposed development will not act in combination with other plans or projects to result in cumulative impacts on ecological receptors in the area. The permitted Pinewood Wind Farm and the Laois-Kilkenny Reinforcement Project were subject to EIA/AA which concluded that these projects would not result in significant effects on the ecological environment. There are no strategies/objectives in the Laois County Development Plan that are likely to result in significant in combination effects with the proposed development. Other proposed/permitted developments in the area are small scale residential/agricultural which are not likely to act in combination with the proposed development to result in cumulative impacts.

### **EIAR conclusion**

Subject to the proposed mitigation measures, no significant impacts are predicted on ecological receptors on the site or within the zone of influence of the proposed development.

## **Assessment**

Having regard to the limited overall footprint of the proposed development, the evaluated low importance of the habitats present on the site and the abundance of similar habitat in the wider environment, I do not consider that significant effects on habitats are likely to occur. Similarly, any effects on species that would use the site for foraging would be highly localised with an abundance of similar habitat in the wider environs to accommodate species that may be displaced by the proposed development. While species of birds mentioned in the submission by Kevin Brophy & Others (hen harrier, buzzard, kestrel etc) may use the site occasionally, there is no evidence that the site is of any significance to these bird species.

Issues have been raised by the DAU and other observers regarding potential impacts on bats. While specific bat surveys were not conducted as part of the current application, comprehensive surveys were conducted as part of the permitted wind farm which included consideration of the proposed substation site. As part of the development, it will be necessary to remove sections of hedgerow with the potential for impacts on bats. Having regard to the limited extent of hedgerow and tree removal and the application of the mitigation measures proposed, I do not consider these impacts would be significant. The new hedgerows proposed as part of the landscaping scheme will also be beneficial for bat species using the site.

I therefore accept the conclusions reached in the EIAR that the effects on biodiversity associated with the proposed development on its own, or in combination with the permitted windfarm, the grid reinforcement project and other existing, permitted or proposed developments are not likely to be significant and will be mitigated by the measures outlined in the EIAR. I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on biodiversity to be fully assessed by the Board. The information contained therein is supported by the AA Screening Report and the NIS, which is considered in more detail below under Appropriate Assessment (Section 11.0).

## 10.7. Land & Soil

The assessment of the potential impacts of the proposed development on land, soil and the geological environment is contained in Chapter 6 of the EIA. It describes the baseline environment and the likely significant effects associated with each phase of the proposed development. Mitigation measures to limit any identified effects are recommended and the residual effects post mitigation are also assessed. This chapter is supported by Annex 6.1 (Volume 11) which provides a site investigation report including the results of trial pit logs and dynamic probe log investigations.

### **EIA summary**

Information on the existing environment was obtained from a desk top study using recognised databases and map sources, complimented by walkover surveys and intrusive site investigations.

The published soil map for the area shows that poorly draining mineral soil and deep well draining mineral soil are the dominant soil types at the site. The map of local subsoil cover indicates that Namurian sandstone and shale tills are present on the far west of the site, with bedrock mapped close to, or, at the surface for the remainder of the site. Trial pits and dynamic probe investigations were carried out within the site and along the route of the proposed access track (Fig 6.2). The subsoils encountered consist mainly of slightly gravelly SILT with some localised CLAY and SAND. Depth to bedrock ranged from 1.3 m to 6.6m. Rock is shallowest at the north-eastern corner of the substation footprint and appears to deepen to the west/southwest. No ground stability issues were identified from the trial pit excavation.

While the GSI bedrock map indicates that the bedrock underlying the site comprises Namurian sandstones, shale bedrock was encountered in all of the trial pits undertaken at the site. There are no GSI recorded Geological Heritage sites, mineral deposit sites or mining sites (current or historic) within the proposed development area.

The development will involve the removal of soil, subsoils and bedrock to facilitate the construction of the proposed substation. The development involves a split-level design to reduce the amount of material to be excavated to provide the substation

footing and in turn reduce effects on land and soil. It is estimated that c 62,000m<sup>2</sup> of subsoil will be excavated and that c 33,250m<sup>3</sup> will not be suitable for re-use within the site. Where the excess material comprises suitable aggregates, this will be used to construct access tracks/areas of hard standing within the windfarm site. Where the excess material comprises topsoil/subsoil it will be used for reinstatement or landscaping purposes within the windfarm site. In the event that spoil is encountered which cannot be reused either within the proposed development site or within the permitted wind farm site, the material will be disposed of by a licensed contractor.

### **Predicted impacts during construction**

- Soil, subsoil and bedrock excavation, which will be localised to the development footprint.
- Minimal volumes of soil, subsoil and bedrock will be removed compared to total resource available.
- No infrastructure will be constructed within or adjacent to any designated sites.
- Erosion of exposed soil/subsoil.
- Contamination of soil by leakages/spills and the potential to impact on the geological and water environment.

### **Predicted impacts during operation**

- Minor accidental leaks or spills of fuel/oil associated with maintenance plant/vehicles.
- Risk of contamination of soils/groundwater associated with spills/oils from transformer within the substation which is oil cooled.

### **Predicted impacts during decommissioning**

Decommissioning of the substation is not proposed, no effects will occur.

### **Cumulative Effects**

- The potential for significant effects during construction are unlikely due to the localised and near the surface nature of the works. There is an absence of likely significant effects during the operation/decommissioning phases.



- Given the absence of likely significant effects from the project, there is no likelihood of significant effects cumulatively with other projects. There is no pathway for the project to act in combination with other projects.
- The residual effects of the permitted wind farm on land, soils and geology were assessed to be not significant.

### **Mitigation measures**

The EIAR contains a suite of standard best practice measures to mitigate impacts on land and soil during each phase of the development. These include:

- Side casting and appropriate temporary storage of excavated material for reuse. Installation of silt fences around stock-piles/excavated areas to limit movement of entrained sediment in surface water runoff. No works will take place during periods of heavy/prolonged rainfall to minimise run-off. Drainage systems will be implemented to limit run-off effects. Use of bog mats to support construction plant and machinery on soft ground to avoid erosion of soil/subsoil.
- Bunded areas for the storage of fuels/oils with a capacity of 110% the volume stored. Bunded area will be roofed to reduce ingress of rainfall. On site re-fuelling using a mobile double skinned browser and standard measures to avoid accidental leakages (drip trays/ fuel absorbent mats). Spill kits to deal with accidental spillages and an emergency plan will be incorporated into the CEMP.
- The transformer and any hydrocarbon storage areas will be located in a roofed concrete bund. The electrical control buildings will be appropriately bunded.

### **Residual Effects**

The soils that will be removed are common in the locality. The residual effect on the land, soil and geological environment is the disturbance and relocation of c 62,000m<sup>3</sup> of soil, subsoil and bedrock during construction. Subject to the mitigation measures proposed no significant residual effects are predicted to arise.

## **EIAR conclusion**

The EIAR concludes that no significant effects are likely on land and soil.

## **Assessment**

The main effects on land and soil will occur during the construction stage which will result in direct effects on soil, subsoil and the geological environment. Having regard to the limited overall footprint of the development and the abundance of similar material in the wider environment, I do not consider that significant effects are likely. The effects are localised and contained within the development site. No specific issues relating to land soils and the geological environment have been raised in the submissions.

I accept the conclusions reached in the EIAR that the effects associated with the proposed development on its own, or in combination with the permitted windfarm, the grid reinforcement project or other existing, permitted or proposed development are not likely to be significant and will be mitigated by the measures outlined in the EIAR. I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on lands, soils and the geological environment to be fully assessed.

## **10.8. Water**

The potential impacts of the proposed development on the water environment are assessed in Chapter 7 of the EIAR.

### **EIAR summary**

Baseline conditions were established from a desktop study using a variety of recognised data sources, walkover surveys and field investigations. A total of 7 no. trial pits and dynamic probes were undertaken at the substation location to investigate subsoil depth, lithology and groundwater conditions. Field hydrochemistry measurements were also undertaken (electrical conductivity, pH, dissolved oxygen and temperature) to determine the origin and nature of surface water flows and water sampling to determine baseline water quality.

The site is situated within the Owenbeg River catchment. The Owenbeg River flows in a southerly direction approximately 2km west of the site. (Fig 7.2). There is one

watercourse within the proposed development site, the Knockardagur stream. It is a small 1<sup>st</sup> order stream which flows in a westerly direction within the hedgerow immediately south of the footprint of the proposed substation. The stream rises from a small spring that is located c 10m to the south of the substation footprint. Spring flow rates are < 5 L/s. The development will not interfere with the spring outfall nor will a crossing be required across the stream.

The stream is predominantly dry and only likely to have flow rates following intense or prolonged rainfall. There is a man-made drain along the western boundary (downslope) along an existing hedgerow. This drain, which is only likely to have flows during wet periods, discharges to the Knockardagur to the southwest of the site. A second stream flows along the hedgerow to the west (downslope) of the proposed access track which merges with the Knockardagur stream at the same location as the drain (Fig 7.3).

No recurring flood events were identified from the OPW's flood hazard mapping either within the proposed development site or in the surrounding area. No flooding incidences are mapped along the Owenbeg River immediately downstream of the proposed development site. There is no 1 in 100-year fluvial flood zone mapped within the site or surrounding area and it is concluded that the site is located in Flood Zone C (Low Risk). The site is not located in an area identified as 'prone to flooding' and no areas within the site or downstream of it are mapped as 'Benefiting Lands'.

The most recent EPA data indicates that the Owenbeg River has a Q4 rating (Good Status) both upstream and downstream of the development site. Water samples were taken from two locations (Fig 7.3). and the results of the analysis are shown alongside water quality regulations in Table 7.10. Total suspended solids were reported below the Freshwater Fish Directive MAC of 25mg/L. Nitrite was below the laboratory detection limit and Nitrate was substantially below the threshold limit of 50mg/L. In comparison to the Environmental Objectives Surface Water Regulations (Table 7.10), Ortho-phosphate, Ammonia N and BOD all exceed the 'Good Status' threshold and Ammonia N and BOD exceed the 'High Status' threshold limits.

Regarding hydrogeology, the Namurian sandstones that underlies the site are classified as a Poor Aquifer, having a bedrock that is generally unproductive except for local zones (Fig 7.6). Most groundwater flow is expected to be in the upper part of

the aquifer. The presence of a spring close to the south of the proposed substation footprint suggests that groundwater levels are close to the surface locally as a result of the low permeability nature of the bedrock. During the trial pit investigations, no significant groundwater inflows were noted within the development footprint area (locations where deepest excavations will occur). An approximate static groundwater level of 2.3m was noted in trial pit TP7. While water strikes suggest a component of deep groundwater flow, shallow groundwater flow is considered to be dominant.

The vulnerability rating of the aquifer at the site is classified by the GSI as 'Extreme'. Based on the site investigations, which encountered bedrock at depths ranging from 1.3 to 6.6m, the actual mapped vulnerability mainly ranges from Extreme to High (3-5m) with more localised 'Moderate' vulnerability. Due to the relatively low permeability of the shales and sandstones underlying the site, groundwater flow paths are likely to be short (30-300m) with recharge emerging close by at seeps and surface streams. As a result, there is low likelihood of groundwater dispersion and movement within the aquifer and surface water bodies such as local drains and streams are more vulnerable than groundwater at this site. The groundwater body (Ballingarry GWB) that underlies the site is assigned 'Good' status.

There are no mapped groundwater source protection areas for public water supplies in the immediate vicinity of the proposed development. There are a number of group water schemes boreholes in the wider area and the proposed development site is not located inside the groundwater zone of contribution of these sources. As the GSI database is not exhaustive, it is assumed that every private dwelling within 500m of the proposed site has a well supply (Figure 7.8). None are located directly down-gradient of the proposed development. Impacts on the groundwater levels of local wells from the site entrance and access road construction are not likely due to the shallow nature of the required excavations.

The proposed development site is not located within any designated conservation site. The site drains to the Owenbeg River via the Knockardagur stream, which forms part of the River Barrow and River Nore SAC.

Due to the nature of the proposed development, being near surface construction activity, effects on groundwater are generally negligible. The primary risk to groundwater would be cementitious materials, hydrocarbon spillage and leakages.

The aquifer is classified as 'Poor' which together with the poorly draining soil that covers the site acts a protective cover to the aquifer. Surface water is the main sensitive receptor given the proximity of the stream within the site and the hydrological connectivity with the Owenbeg River and the SAC downstream.

### **Predicted impacts during construction**

- Earthworks resulting in suspended solid entrainment in surface water with the potential to impact on down-gradient watercourses and dependant ecosystems.
- Excavation dewatering arising from surface water/shallow groundwater seepages and direct rainfall which will create additional volumes of water to requiring management and treatment.
- Release of hydrocarbons arising from accidental spillages during refuelling with the potential to impact on surface water and groundwater.
- Groundwater and surface water contamination from wastewater associated with welfare treatment systems.
- Release of cement- based products on surface water hydrochemistry and ecosystems.
- Deterioration in water quality with the potential to result in significant effects on habitats/species within the SAC.

### **Predicted impacts during operation**

- Increased run-off and erosion in nearby stream due to an increase in hard surfaced areas.
- Hydrocarbon/chemical spillages and impacts on surface water and groundwater.
- Wastewater effluent from welfare facilities will be discharged to a sealed tank and will be removed to a licensed wastewater treatment facility for treatment and disposal.

### **Predicted impacts during decommissioning**

None

## **Cumulative Effects**

The main likelihood for cumulative effects is assessed to be to surface water rather than groundwater quality. Due to the hydrological setting of the site which consists of clay covering a poor aquifer and the near surface nature of construction activity, cumulative effects with regard to groundwater quality or quantity from the proposed development are not assessed as likely.

With regard to surface water, the only development likely to act in combination with the proposed development is the Pinewood Windfarm, which includes a suite of mitigation measures to ensure that surface water run-off from the development area will be to an extremely high standard prior to discharge. The mitigation measures proposed in respect of the subject development will ensure that all water discharged from the site has been subject to substantial treatment to remove sediment and pollutants. There is, therefore, no likelihood for the proposed development to act in combination with the permitted wind farm to contribute to or result in significant water quality effects.

## **Mitigation measures**

A Surface Water Management Plan (SWMP) incorporating the surface water drainage design has been prepared (Annex 3.5 Volume II) and incorporates the principles of SuDS, through an arrangement of surface water infrastructure. The SWMP has had regard to greenfield run-off rates and has been designed to mimic same and is sufficient to accommodate a 1 in 100-year rainfall event.

The suite of surface water drainage infrastructure will include infiltration interception drains, swales, sedimats, flow attenuation and filtration check dam, settlement ponds, lagoon-type sediment ponds and buffered outfalls. Best practice measures will be implemented to mitigate impacts on the water environment through each phase of the development. A summary is provided below.

## **Mitigation during construction**

- Prior to commencement of construction activities, silt fencing will be placed along the western boundary of the proposed site and upgradient of the Knockardagur stream.

- All necessary preventative measures will be implemented to ensure that sediment or deleterious matter will not enter the stream or any other watercourse/drain.
- Disturbed Sediment Entrainment Mats (Sedimat) will also be used in the stream.
- Silt fences will be imbedded into the soil to ensure all site surface water is captured and directed to the surface water drainage system.
- Discharge to ground will be via a buffered outfall arrangement e.g. silt bag which will filter any remaining sediment from the pumped water.
- No pumped water will be discharged directly into local streams and all surface water will be fully treated prior to discharge.
- Interceptor drainage to prevent upslope surface water from entering excavations. Interceptor drainage will be discharged to the site constructed drainage system and not directly to surface waters to ensure greenfield run-off rates are mimicked.
- Earth works will be scheduled to take place during periods of low rainfall to reduce run-off and possible siltation to watercourses.
- Adherence to standard good practice guidance on the storage of fuels/oils on the site. Measures to cater for accidental spillages
- Use of ready-mixed concrete, no batching of wet-cement products will occur on the site.
- Self-contained port-a loos discharge of effluent to the site. with an integrated waste holding tank .

### **Mitigation during operation**

- Stormwater from the site will be discharged to ground via soakaways following attenuation. Discharges will be limited to greenfield run-off rates. Run-off from the transformer and car park will pass through an oil interceptor. Minor volumes of groundwater seepage will arise from the cut slopes which will be directed into the surface water management system for appropriate treatment prior to discharge.

- Standard measures will be implemented to ensure appropriate storage of fuel/chemicals on the site. All bulk tanks will be located within an impervious bund.

### **Mitigation during decommissioning**

None

### **Residual effects**

Following the implementation of the mitigation measures , residual effects are assessed as not likely to be significant during the construction/operational phases of the development.

### **EIAR conclusion**

The EIAR concludes that following the implementation of the proposed mitigation measures there is no likelihood of significant effects on surface water or groundwater either alone or in combination with other projects.

### **Assessment**

I consider that the EIAR has adequately assessed the impacts of the proposed development on the water environment. I accept that the surface water and particularly the Knockardagur stream to the west of the site, is the system which is most at risk from the construction and operational stages of the proposed development. I am satisfied that with proper implementation of the best practice mitigation measures as detailed in the Surface Water Management Plan, that impacts on water quality will not be significant. No instream works are proposed and the mitigation measures are designed to prevent sediment release and other contaminants from entering the water environment.

I accept the conclusions reached in the EIAR that the effects associated with the proposed development on its own, or in combination with the permitted windfarm, the grid reinforcement project or other existing, permitted or proposed development are not likely to be significant and will be mitigated by the measures outlined in the EIAR. I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on lands, soils and the geological environment to be fully assessed.



The main issues raised in relation to potential impacts on the water environment were raised by the DAU and relate to the adequacy of the surface water drainage system to protect water quality, particularly in the context of nature conservation and potential impacts on the conservation interests of the River Barrow and River Nore SAC. A comprehensive response was provided by the applicant which is considered in more detail in Section 11.0 of this report (Appropriate Assessment).

## 10.9. Air Quality & Climate

### **Introduction**

Chapter 8 of the EIAR provides an assessment of the likely effect on air quality and climate associated with the proposed development.

### **EIAR summary**

The site is located in a rural area which is classed as Zone D for air quality and assessment purposes (EPA, 2019b). Monitoring of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> indicates that baseline levels for these pollutants are substantially below their limit values in Zone D, which encompasses the proposed development site.

### **Predicted impacts during construction**

- Generation of dust associated with excavation and earth moving processes with the potential to cause dust soiling and impacts on human health.
- Exhaust emissions from operating plant and machinery.

### **Predicted impacts during operation**

- Beneficial impacts on climate associated with the replacement of fossil fuel in electricity production by renewable electricity from the permitted windfarm.
- Vehicle exhaust emissions associated with the maintenance of the site.

### **Predicted impacts during decommissioning**

No impacts will occur as the proposed substation will be part of the national electricity network and will continue in use.

## **Cumulative Effects**

It is likely that the proposed development and the permitted Pinewood Wind Farm will be constructed concurrently as a single project. The EIA for the windfarm concluded that significant air quality and climate impacts are not likely to arise. There is, therefore, no potential for the proposed development to act in combination with the permitted windfarm to result in cumulative effects.

## **Mitigation measures**

The EIA details a number of standard type mitigation measures to reduce potential dust soiling and nuisance during construction (and include road cleaning, damping down of access tracks, installation of wheel wash, inspection of roads, use of covered vehicles for transport of materials likely to generate dust). The measures will be incorporated into a Dust Minimisation Plan which will be prepared in advance of construction. Due to the short term and temporary nature of the works, the effect on climate from vehicles/plant exhaust emissions will not be significant. Best practice construction methods including 'just in time' delivery methods and the minimisation of fuel use will reduce construction related emissions.

No mitigation measures are considered necessary with regard to air quality during the operational stage. Impacts on climate are assessed as positive associated with the replacement of fossil fuel in electricity production with renewable energy from the wind farm.

## **Residual effects**

Subject to the implementation of the Dust Minimisation Plan and other mitigation measures the construction phase of the development is likely to have a short-term negligible effect on air quality and climate. The likely effect on air quality will be imperceptible and impacts on climate will be beneficial.

## **EIA conclusion**

The assessment of baseline air quality in the region has shown that current levels of key pollutants are significantly lower than their limit values. Any likely adverse construction effects on air quality and climate are assessed as Low to Negligible and no significant effects will arise. The proposed development will result in a long-term positive effect on both air quality and climate during the operational phase.

## **Assessment**

Air quality in the area is good and typical of a rural environment with a low level of pollutants. The main potential for significant effects will arise during the construction stage associated with the generation of dust and other fugitive emissions. The construction stage will also involve the operation of plant and machinery that will generate exhaust emissions. Subject to the mitigation measures proposed which are recognised best practice, no significant effects on air quality and climate are likely to arise. I accept that the proposed development will be positive in terms of climate.

I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on air and climate to be fully assessed by the Board. I accept the conclusions reached in the EIAR that the effects associated with the proposed development on its own, or in combination with the permitted windfarm, the grid reinforcement project and other existing, permitted or proposed developments are not likely to be significant and will be mitigated by the measures outlined in the EIAR.

### **10.10. Landscape**

#### **Introduction**

The potential impacts of the proposed development on the landscape and the visual amenities of the area is assessed in Chapter 9 of the EIAR.

#### **EIAR Summary**

The study area is described as situated in a transitional area at the north-western fringe of the Castlecomer Plateau, between the low-lying landscape to the west and more upland undulating hills to the east. The eastern fringe of the Castlecomer Plateau is the most elevated portion of the plateau reaching c 336m above ordnance datum. Within the study area, orientated north-south is an escarpment which rises to 302m AOD, which slopes down to the valley of the Owenbeg River. The site is located at c 240m AOD.

The areas to the west of the site comprise rolling agricultural farmland with small fields bound by hedgerows. There are areas of transitional woodland scrub scattered throughout the area and a block of commercial conifer forest occurs in the southeast.

The R430 regional road is the most substantial road in the study area, passing through the northern section, while local roads serve isolated dwellings within the locality. There are no centres of population close by.

The site lies within Co Laois, while the permitted windfarm straddles Co Laois and Co Kilkenny. The Laois County Development Plan contains numerous policies to protect scenic and exposed/elevated landscapes, scenic views/prospects and rural/visual amenities from inappropriate development.

Within the Landscape Character Assessment incorporated into the development plan (Appendix 6) a total of 7 no. landscape character types have been identified. The site lies within Landscape Character Type LCT 1 – *Hills and Upland Areas*. The Plan contains a number of policies relating to these areas, which generally seek to protect their remote character, preserve/enhance their assets, protect views, manage field boundaries, define popular walking routes/create new routes, implement improvements to visitor attractions and facilitate the development of sustainable rural industries. The Owenbeg River which passes through the study area is identified as a 'river corridor' on Map 6 of the Laois Landscape Character Assessment. These areas are recognised for their importance for their scenic, recreational, ecological, historical and cultural value.

Zone of Theoretical Visibility (ZTV) mapping was used to establish the extent of potential visibility of the proposed development within the study area. It indicates (Fig 9.4) that elevated terrain in the northern, eastern and southern portions of the study area screens views of the proposed development. There would also be no theoretical visibility of the proposed development in the vicinity in the Owenbeg River valley due to its low-lying nature. The ZTV indicates that there are areas where some of the strain towers may be visible but the substation will not. There is potential visibility of the substation /single strain towers from agricultural areas, rural dwellings and the local road network to the west/southwest of the site. The ZTV indicated that no views of the proposed development would be available from the portion of the study area that occurs in Co. Kilkenny.

There are no Scenic Views or Significant Tree Groups, as identified in the Plan, located within the study area. There will be no views of the development from the R340. Cooper's Hill Walk, is the only known relevant public amenity resource within

the study area. This waymarked circular walking trail passes to the south of the site along the L77951 before turning north at the Owenbeg River onto the L7795.

It is not considered that the landscape is rare, and it is not valued in terms of its scenic quality beyond its immediate environs. There is a degree of scenic value associated with the Owenbeg River but due to its enclosed character, views are limited to the immediate vicinity of the river. The overall landscape sensitivity is assessed as Medium-Low in the EIAR.

### **Predicted Impacts during construction**

- Physical landscape impacts associated with disturbance to landform/landcover of the proposed substation footprint and associated access track and site entrance.
- More extensive excavation to create level foundations for the substation (split level) on a sloping site.
- Redistribution of subsoil material around the site to facilitate required gradients for the buildings/structures and electrical equipment.
- Removal of hedgerow along southern perimeter of the proposed substation to facilitate construction of the access track and the construction of the site access.
- Temporary effects on landscape character associated with construction activity (vehicles, plant, welfare facilities for staff, parking etc).

The construction phase impacts will be short-term in terms of duration. The significance of construction impacts on the landscape in the immediate vicinity of the site is assessed Moderate. Significance will reduce with increased distance and the development becomes a smaller component within the overall landscape. Visual effects will occur throughout the construction phase and the visual receptors most likely to be affected are the residents of dwellings to the west.

### **Predicted Impacts during operation**

- Permanent changes in landscape character resulting in an increased sense of industrialisation and building intensity within a predominantly rural setting.

- Scale and intensity of the development will have a noticeable influence on the landscape of the immediate surrounds of the site. The significance will decrease with distance.

The impacts will be long-term or permanent impacts. Views from VP1-VP5 represented by the photomontages indicate that the significance of visual impact will range from Moderate-Slight to Imperceptible. Mitigation planting will screen lower elements and facilitate assimilation into the surrounding landscape setting. The significance of operational phase landscape effects is considered to be Moderate-Slight within the study area, reducing to Slight and Imperceptible at increasing distances.

### **Predicted impacts during decommissioning**

The proposed development will form part of the national electricity network and decommissioning of the substation is not proposed. There will therefore be no decommissioning impacts.

### **Cumulative Effects**

- The main potential for cumulative impacts to arise in combination with the proposed development is with the permitted Pinewoods Wind Farm and the permitted grid reinforcement project.
- The cumulative visual effects of the permitted windfarm and the 110kV line have previously been assessed and the Board concluded that these were not significant.
- There has been no change to the baseline environment (landscape designations, scenic views/prospects). The conclusions of the previous LVIA and those of the Board remain valid.
- The proposed wind farm will have a greater influence on the landscape character in this area being located on a higher plateau uplands area. The proposed development will contribute a low and extremely localised magnitude of impact and is therefore considered to be insignificant.
- Visual impacts are not assessed as significant due to the modest nature of the proposed development, which does not break the ridgeline and the functional inter-dependence of the developments.

## **Mitigation Measures**

- Achieved in the first instance by avoidance and the appropriate siting of the development to ensure it is capable of absorption and not visible above a primary ridgeline.
- Retention and enhancement of hedgerows within and bordering the site.
- New and supplementary planting around the perimeter of the proposed developments.

## **Residual Impacts**

- The proposed mitigation measures will not alter any of the predicted impacts on the landscape so the significance of impacts on the landscape is assessed to remain unchanged when compared to the pre-mitigation impact.
- The proposed mitigation measures, while they will not entirely screen the proposed development, it will facilitate its assimilation into its surrounds.

## **Conclusions on Landscape**

My assessment of the landscape and visual impacts associated with the proposed development are outlined in Section 9.0 of this report (Planning Assessment). I accept that the impacts associated with both the construction and operational stages of the development will be highly localised and will decrease with distance from the site.

I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on the landscape and visual amenities of the area to be fully assessed. I accept the conclusions reached in the EIAR that the effects associated with the proposed development on its own, or in combination with the permitted windfarm, the grid reinforcement project or other existing, permitted or proposed development are not likely to be significant and will be mitigated by the measures outlined in the EIAR.

## 10.11. Cultural Heritage

### **Introduction**

The potential impacts of the proposed development on the archaeological, architectural and cultural heritage of the area are described and assessed in Chapter 10 of the EIAR.

### **EIAR summary**

Baseline conditions were established from a desk top study using recognised sources of information and from field investigations.

There are no World Heritage Sites (or sites included in the Tentative List) or National Monuments within the site or in its vicinity. There are two Recorded Monuments within 1km of the site which are identified as enclosures. RMP LA030-16 lies c 140m to the northeast and has no above ground expression. Part of a large sub-circular enclosure is stated to be visible on aerial photography in this location. The second enclosure is located c 780m west of the proposed development. It takes the form of a circular area measuring approximately 39.2 m in diameter and is defined by an earthen bank from southwest to northeast and elsewhere by a scarp. No other visible surface remains survive.

There are no Zones of Archaeological Potential within or close to the site. The cartographic analysis, field investigations and aerial photographs do not indicate the presence of any archaeological features within the development site.

The Protected Structures in the area include a thatched house in Aghnacross c.600m to the west and St Lazerian's Church c 1.6km to the northeast.

### **Predicted impacts during construction**

The only potential for impacts on the archaeological, architectural or cultural heritage resource would be associated with indirect impacts on previously undiscovered archaeology arising from construction.

### **Predicted Impacts during Operation**

The enclosure (RMP LA030-016) that occurs to the northeast has no above ground expression. It is predicted that low noise levels will be generated by the proposed substation with the potential to result in a low-term, reversible and imperceptible



operational effect. However, the effect will not be significant. It is assessed that that there is potential for a likely long term, reversible and imperceptible visual effect on the enclosure (RMP LAO30-015) to the west, but that the effect will not be significant. The overall conclusion reached in the EIAR is that the proposed development will not result in a likely significant operational effect on the archaeological resource.

It is assessed that there is potential for a long-term, reversible and imperceptible operational visual effect on protected structures but due to distance this impact is not likely to be significant.

### **Predicted Impacts during Decommissioning.**

There will be no impacts as the substation will not be decommissioned.

### **Cumulative Effects**

Cumulative effects are considered in the context of the permitted Pinewood Windfarm and other existing, permitted or proposed developments.

An Bord Pleanála concluded that the permitted windfarm would not result in any significant effects on the historical built environment. Given that there have been no changes to the existing environment or policy context and that the effects resulting from the proposed development are unlikely to be significant, it follows that the cumulative effects between the windfarm and the proposed are unlikely to occur.

Cumulative effects with other existing, permitted or proposed development, (residential, agriculture, forestry) which would involve excavations are not likely to arise as effects from the developments are unlikely to extend beyond their individual site boundaries. The potential for cumulative impacts is assessed as low.

### **Mitigation Measures**

Archaeological monitoring of all excavations associated with construction will be carried out, in accordance with established best practice.

### **Assessment**

The applicant considers that the DUA's requirement for pre-development test trenching is unnecessary on the grounds that there is no evidence of any archaeological feature or material on the site, or a significant archaeological

resource in the locality. The information presented in the EIAR which includes analysis of historic maps, aerial photography, searches of the topographical files of the National Museum and other sources of information suggest this to be the case. It is accepted that the site may contain previously unrecorded archaeological material, and the normal course of action is to carry out archaeological monitoring of ground works to mitigate potential impacts. I note that this was the position adopted by the Board in its determination of the permitted wind farm development (Condition No 9). The application included a substation on the site.

The impact of the proposed development on RMP LA030-015 is raised by Mr Kevin Brophy & Others. The monument includes the remnants of an enclosure located to the west of the site (780m). There will be no direct impacts on the enclosure and while the EIAR refers to potential visual effects, I accept that due to the intervening distance and vegetative screening, significant effects are not likely to occur.

Having regard to the Board's determination of the previous application for the permitted wind farm and the absence of any evidence of any archaeological material within the site, I consider that archaeological monitoring of the site during construction would be adequate to mitigate any potential significant impacts on the archaeological environment. I accept the conclusions reached in the EIAR that the effects associated with the proposed development on its own, or in combination with the permitted windfarm, the grid reinforcement project and other existing, permitted or proposed development in the area, are not likely to be significant and will be mitigated by the measures outlined in the EIAR.

I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on the archaeological, architectural and cultural heritage of the area to be fully assessed.

## **10.12. Noise & Vibration**

### **Introduction**

Chapter 11 of the EIAR is dedicated to the assessment of Noise and Vibration effects associated with the proposed development. It is supported by Annex 11.1 to 11.3 in Volume 11)

### **EIAR summary**

Background noise levels were established at the site by the installation of an unattended sound level meter at a location considered to reflect the noise environment. Noise levels were logged continuously at 10-minute intervals over a 7-day period in March 2020. The noise sources were typical of the rural environment and there were no significant sources of vibration.

### **Predicted impacts during construction**

A variety of plant and machinery will be used during the construction stage with the potential to generate significant noise levels. The potential impacts of construction stage noise and vibration is assessed in accordance with best practice guidance as described in the EIAR. There is no statutory Irish guidance relating to the maximum permissible noise levels that can be generated by the construction phase of a development. Best practice guidelines are taken from BS5228-1:2009+A1:2014 '*Code of practice for noise and vibration control on construction and open sites- Noise*'.

Under this guidance NSL's are designated into a specific category (A, B or C) based on existing ambient noise levels in the absence of construction activity. This then sets a threshold noise value that, if exceeded, indicates a significant noise impact is associated with the construction activities (Table 11.1 of EIAR). The noise levels measured at the site were in the range of 29 and 48  $L_{Aeq,T}$  and have therefore been afforded a Category A designation. If the specific construction noise activity exceed the appropriate category value (e.g 65 dB  $L_{Aeq,T}$  during daytime period) then a significant effect is deemed to have occurred.

The EIAR considers each element of construction and the plant/machinery required. Table 11.2 sets out details of plant items that will be used during the construction, typical noise emission levels at 10m distance and the predicted noise level at 100m. The predicted noise level at the nearest dwelling are just within the criteria of 65  $L_{Aeq,T}$ . Other dwellings at 180m and 390 m southwest of the proposed development are predicted to experience noise levels of 62  $L_{Aeq,T}$  and 55  $L_{Aeq,T}$  respectively. The likely worst-case effect at the nearest dwelling is assessed to be negative, temporary and not significant.

Regarding vibration, there are some activities proposed during construction with the potential to generate vibration effects (e.g. compaction of access track aggregates).

While no significant effects at sensitive locations are predicted due to the localised nature of the works and the distance to nearby receptors, all construction activities will be required to operate below the recommended vibration criteria set out in the *'Guidelines for the Treatment of Noise and Vibration in National Road Schemes'* (NRA, 2004).

### **Predicted impacts during operation**

The EIAR refers to an EirGrid study<sup>2</sup> on the noise effects of a substation at Dunfirth which indicated that measured noise levels (LAeq) were less than 40 dB(A) at 5m from the boundaries of the substation. This noise level is below the WHO threshold limits for preventing effects on sleep and for serious and moderate annoyance in outdoor living areas. There were no distinct tonal elements to the recorded noise level. To avoid any noise impacts from 110 kV substations at sensitive receptors it was recommended that a minimum of 5m be maintained between the substation and the land boundary of any sensitive receptor.

The proposed development will have comparable noise levels to the 110 kV substation. Due to the distance between the proposed development and the nearest dwelling (100m), noise is not assessed as likely to result in significant adverse noise effects. It is predicted that the noise levels experienced at the nearest dwelling will be less than 25dBA.

### **Cumulative Effects**

It is anticipated that the proposed Pinewood Wind Farm will be constructed concurrently with the proposed development. Similar type plant/machinery will be used in the construction of the proposed and permitted development. Due to the increased separation distance between receptors and the wind farm construction activities, there is no likelihood of the total construction noise level increasing. There will be no cumulative effects that would give rise to significant effects at the nearest NSL's.

Once operational there will be no significant noise effects associated with the proposed substation. No significant noise generating developments have been introduced to the local environment which could alter the findings and conclusion of

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<sup>2</sup> EirGrid Evidence Based Environmental Studies Study 8: Noise -Literature review and evidence-based field study on the noise effects of high voltage transmission development ( May 2016)

the EIS/EIAR previously prepared or which could conflict with the EIA undertaken by An Bord Pleanála or the conclusions reached.

Three new dwellings have been permitted and/or constructed since the preparation of the original EIS/EIAR and the predicted noise levels at all existing, permitted and proposed dwellings within 1,030 of a permitted turbine have been re-assessed.

Noise levels at one dwelling will exceed the 43 dB(A) limit specified in Condition 19 attached to the Pinewood Wind Farm by 0.6 db. Mitigation measures, which may include the implementation of noise reduced operations will ensure that the prescribed noise limit is not exceeded. Having regard to the assessments undertaken, cumulative effects with the operational wind farm will not be significant.

### **Mitigation measures**

Typical noise abatement measures will be implemented during construction including limiting the hours of construction, selection of plant/machinery with low inherent likelihood of generating noise/vibration, placing noisy plant as far away from sensitive properties as possible, regular maintenance/servicing of plant and machinery etc. It is also proposed that noise levels will be monitored during critical periods and at sensitive locations and that a site representative will be appointed with responsibility for matters relating to noise and vibration. Channels of communication will be maintained with local authority and residents. No noise mitigation measures are considered necessary for the operational stage.

Vibration levels will be limited to the guideline values and as such the proposed development is not likely to result in cosmetic damage. Due to the separation distance between the site and sensitive receptors, no mitigation measures for vibration are considered necessary.

### **Residual Effects**

The construction phase is temporary in nature and due to the separation distance to nearby sensitive receptors it is assessed that noise levels will not be excessively intrusive. The application of noise limits, limiting construction hours and the implementation of appropriate mitigation measures will ensure that noise and vibration effects are unlikely to be significant. The residual effects are assessed to be likely, negative, slight, temporary and unlikely to be significant,

No likely significant residual noise effects are likely to arise from the operational stage of the proposed development. There is no anticipated source of vibration and accordingly no likely significant effects are predicted.

### **EIAR Conclusion**

No significant noise/vibration effects are likely to arise from the construction or operational stage. The likely cumulative effects for both the construction and operational staged of the proposed development with the permitted Pinewoods Wind Farm have been assessed and have been determined not to be significant.

### **Assessment**

I consider that the issues raised by the HSE have been adequately addressed in the EIAR. The selection of the noise monitoring location is explained in the EIAR (11.4.1) and was chosen as representative of the nearest noise sensitive receptor but at a remove to eliminate noise sources generated at the dwelling, which is located within a working farm. The potential for significant noise and vibration effects, associated with each phase of the development has been adequately and appropriately assessed in accordance with established guidance.

The greatest potential for impacts is associated with the construction phase, and it has been demonstrated in the EIAR that the combined noise levels from construction activities will be at or below the appropriate limits for daytime hours. The applicant has committed to a programme of noise monitoring and that effective communication channels will be established between the contractor/developer, local residents and Laois Co Council to ensure that noise related complaints are fully addressed and mitigation applied if necessary.

I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on noise and vibration to be fully assessed. It is possible that the construction of the new 110kV line could occur concurrently with construction of the proposed substation and the permitted windfarm. Given the linear nature of the project and the short-term nature of the works in any one location, significant cumulative effects are not considered likely.

I accept the conclusions reached in the EIAR that the effects associated with the proposed development on its own, or in combination with the permitted windfarm, the grid reinforcement project and other existing, permitted and proposed development

are not likely to be significant and will be mitigated by the measures outlined in the EIAR.

### 10.13. Material Assets

#### **EIAR summary**

Material assets are considered in Chapter 13 under the headings of transport and access, aviation, telecommunications, resources and utility infrastructure. This chapter is supported by Annex 13.1 to 13.3 (Volume 11).

#### **Transport and access**

The road network in the vicinity of the proposed development site consists of regional roads and local roads. The R430, which is designated as a strategic regional route in the development plan is located c 1.5km to the north of the site. The R432 is located c3.5km to the west and the R426 is c 6km to the southeast. The N80 National Secondary Road is c13km to the northeast and the N78 is c 9km to the southeast. Many of these roads will be used as possible haul routes to transport construction materials to the site.

While the final selection of haul routes to the site will be dependent on the chosen material suppliers, vehicles will be permitted to access the site via the R430, L7800, L778001 and between the L78001 and L780001 and the L77951. Construction traffic will also use short sections of private access track associated with the Pinewoods Wind Farm between the L78001 and L7795. The L1828 will not be used for the transportation of materials to the site. The haul routes from a range of potential quarries, which may be selected to provide construction materials are illustrated in Annex 13.1 (Volume 11).

A new site entrance will be constructed to the south of the site off the L77951 and c 0.65km of track will be constructed to provide access to the proposed substation. Visibility splays of 60m will be provided in each direction. The proposed construction material haul route has previously been subject to an extensive and comprehensive condition and structural assessment. The haul route from the R430, has undergone falling weight deflectometer tests, a road safety audit and traffic impact assessment as a whole which found that significant effects on the road network were unlikely to occur.

Delivery of general construction materials and transport of aggregates to/from the site will be generally undertaken using standard HGV's, cement mixer trucks and dump trucks, the largest of which will be a 16.5m articulated vehicle (Fig 13.1).

### **Predicted impacts during construction**

The construction phase is expected to last 15-18 months. There will be trips associated with the arrival/departure of construction staff and with the delivery of aggregates, ready-mix concrete and electrical equipment. Table 13.5 details the estimated amount of deliveries to/from the site.

It is estimated that approximately 862 loads will be delivered to the site over the course of the construction phase and that approximately 3,911 loads of excavated material will be transported from the site to the Pinewoods Wind Farm, or off-site for disposal. This equates to an average of 15 no. loads or HGV movements per day. It will also be necessary to import additional aggregate material (605 no. loads) to finish the track and substation compound to the required standard. Following completion of construction works, it is estimated that c 25 no. loads will be needed to remove all temporary plant, equipment, machinery and materials.

Staff numbers during the construction phase are expected to peak at c 50 at any one time. On-site parking will be provided on site. The site access will be provided with visibility splays and all works relating to the construction of the access will take place on private lands, which will ensure that there are no significant effects on the local road network associated with delays/disruption of traffic flows.

The predicted effect on the road network associated with construction are assessed as not significant and are concluded to be a slight negative effect of short duration and high probability.

### **Predicted impacts during operation**

Volumes of traffic to the site will be very low during the operational stage associated with routine maintenance. Parking will be available on the site. In the event of a major fault, larger machinery may require access to the site. The effects of traffic associated with the operational stage of the development will be imperceptible as a result of the type of traffic and low volumes generated.



## **Cumulative effects**

Cumulative effects are only likely to occur during the construction stage. The proposed development will be commissioned as a single construction phase with the Pinewood Wind Farm and cumulative transport and access impacts associated with increased traffic on the local road network are likely to arise. The majority of other developments such as one-off housing and agricultural developments do not generate significant volumes of traffic during the construction or operational stages that would result in cumulative effects.

Upgrade works to the public network associated with the windfarm, as permitted by the Board, will be substantially completed prior to the delivery of materials for the proposed development. There have been no significant changes to the existing road network, or its condition, in the intervening period which would conflict with the conclusions reached by the Board.

While the proposed development will result in an increase in the volume of traffic movements on the local road network during construction, given that the conclusion reached is that the effects arising will be slight, negative, short-term and high probability and the conclusions reached by the Board in respect to the Pinewood Wind Farm, it is concluded that significant cumulative effects arising from the project as a whole are not likely to arise.

The Laois-Kilkenny Reinforcement Project to which the proposed development will be connected, may be constructed in advance of, or, concurrently with the proposed development. Due to the temporary duration of the construction phase associated with the respective projects and the transient nature of the construction activities associated with the 110kV line, there is no likelihood of significant cumulative effects.

## **Mitigation measures**

A suite of standard mitigation measures are proposed which will be incorporated into the Traffic Management Plan including scheduling of works to normal working hours, scheduling to avoid cumulative vehicles during peak traffic movements at the permitted wind farm, use of motorway/national/ regional routes to transport of all materials to/from the site, monitoring of haul routes etc. Should a deterioration in the road condition be identified remedial measures in agreement with the local authority shall be implemented.

## **Residual effects**

Subject to the implementation of the mitigation measures significant residual effects during construction are assessed to be slight, negative and short-term. No residual effects are likely during the operational stage.

## **Aviation**

Due to the absence of tall structures, the proposed development is not likely to give rise to effects on, or, interactions with aviation. However, as the development forms part of the permitted wind farm, it was considered appropriate to re-evaluate the potential for significant effects arising for the project as a whole.

There are no airports, aerodromes or airstrips in the vicinity of the proposed development. Midlands Heliport is located c 1km to the southwest. It is not licensed by the IAA, but may be used as a training facility for microflights.

## **Predicted effects during construction and operational phases.**

No significant effects on aviation are predicted during the construction stage due to the low altitude of activity. Due to the generally low altitude of the proposed development (tallest structure of 20.75m), it is not considered that there would be any effects on aviation during operation. The proposed development is not located within any low flying areas, restricted areas, danger areas or low-level routes. While the proposed development (and the permitted Pinewood Wind Farm) is located within a 'Military Operating Area', given the responses received from the Department of Defence during the consultation process, significant effects are not likely to arise.

The level of activity associated with the heliport is unclear. A scheme of aviation lighting will be installed on the wind turbines in accordance with the requirements of the IAA. Due to the low altitude of the proposed development, no significant effects on the Midland heliport are considered likely.

## **Cumulative effects**

Due to the absence of other tall structures in the vicinity of the proposed development site and the permitted wind farm development, it is considered unlikely that the projects as a whole would be likely to have a significant effect on aviation in combination with other existing, permitted or proposed developments.

### **Mitigation measures**

Due to the absence of tall structures and likely aviation effects, no mitigation measures are considered necessary for the construction or operational stage of the development.

### **Residual effects**

No significant residual effects are likely to occur.

### **Telecommunications**

Due to the nature of the proposed development and the absence of tall structures, interference or adverse effects on telecommunications are not likely. As the development forms part of the Pinewood Wind Farm, it was considered appropriate to re-evaluate the likelihood of significant effects arising from the development as a whole.

No significant effects are likely to occur during the construction stage. Extensive consultation with telecommunication providers confirmed that adverse effects on existing telecommunications signals are unlikely to occur as a result of the proposed development. Should any form of interference be identified and attributed to the project, remedial works will be undertaken to ensure uninterrupted provision of service (signal amplifiers, active deflectors and relay transmitters, repeater stations, booster units, installation of suppression equipment etc).

No significant residual effects are likely to occur.

### **Resources and Utility Infrastructure**

This section of the EIAR considers interactions with existing renewable and non-renewable resources and existing utility infrastructure.

The construction phase is not likely to have any significant effects on existing renewable resources, non renewable resources or utilities infrastructure. During the connection of the project to the national grid there may be some minor temporary disruption to electricity supply at a local level. EirGrid will balance the loading on the network to ensure that no significant disruption occurs and significant effects do not arise. The development will result in the extraction of non-renewable resources in the form of aggregates. These will be sourced from quarries that have full planning permission and the effects of this extraction has already been fully assessed. As a

result significant effects on the environment are unlikely to occur as a result of the proposed development, either individually or in combination with other existing, permitted or proposed developments.

The operational stage will not result in any likely effects on existing utility infrastructure or renewable or non-renewable resources. By facilitating the export of electricity generated by the permitted windfarm to the electricity network, the proposed development will result in positive effects in terms of carbon reduction and climate change.

The proposed development is not assessed as likely to result in any significant cumulative effects on resources or utility infrastructure, either individually or in combination with other existing, proposed or permitted development, including the Pinewood Wind farm.

### **Mitigation measures**

No specific mitigation measures are considered necessary for the construction or operation stages of the proposed development.

### **Assessment**

The issues raised in the submissions relating to roads and transportation are addressed above in the Planning Assessment in Section 9 of this report and are not repeated here.

Mr Brian Brennan raised issues regarding the lack of consideration of the Midland Heliport and potential aviation. I note from the applicant's response that the heliport was considered and assessed in conjunction with the permitted windfarm. The substation is located on a sloped site and the tallest structure is 20.75m, which is significantly below the height of the proposed turbines in the permitted windfarm. The turbines will be fitted with aeronautical lighting in accordance with the requirements of the IAA. No significant issues are, therefore, predicted that would impact on aviation safety.

I accept the conclusions reached in the EIAR that the effects associated with the proposed development on its own, or in combination with the permitted windfarm the grid reinforcement project and other existing, permitted or proposed development in the area, are not likely to be significant and will be mitigated by the measures

outlined in the EIAR. I consider that the information provided in the planning application documents is sufficient to allow the impacts of the proposed development on material assets in the area to be fully assessed.

#### 10.14. Interactions

Chapter 14 of the EIAR considers the various interactions between the environmental factors which are shown by means of a matrix (Table 14.1). The main interactions are identified as follows.

The main potential interactions with population and human health arise from noise/vibration, landscape effects and material assets. While noise will be generated during construction activity, it will be mitigated by best construction practice. The likely effects will be short term and temporary and not likely to result in significant effects on the local population or its health and well being. No significant effects are likely to arise during the operational phase. It is not therefore anticipated that there will be significant cross factors effects to population and human health from noise and vibration.

Impacts on the landscape will be highly localised and due to the split level design and existing/proposed screening will not dominate the receiving landscape. It is not, therefore, predicted that there will be significant interaction between landscape and population and human health.

In terms of material assets, the only likely interaction relates to transport and access. The construction stage of the proposed development will generate additional traffic movements on the local road network. Subject to implementation of appropriate traffic management measures and other mitigation (dust, noise), it is not anticipated that there will be a significant interaction between population and human health and transport/access.

There is potential for cross effects between biodiversity and land/soil and water. The excavation of land and soils may result in habitat loss and sedimentation of water courses with downstream impacts on habitats and species. The habitats on the site are generally evaluated as of low ecological importance and subject to the implementation of well-established and proven measures to protect water quality, significant effects are not predicted. It is concluded therefore that the proposed

development will not result in a likely significant interaction between biodiversity and land/soil and water.

There is potential for interaction between land & soils and cultural heritage associated with the excavation of soil and the discovery of previously unrecorded archaeological material. Standard mitigation is proposed in the form archaeological monitoring during site works. It is not, therefore, considered that there is potential for any likely significant interaction between cultural heritage and land & soils.

There will be no likely significant interaction between air quality & climate and material assets (transport and access). Exhaust emissions from construction vehicles will result in a negligible adverse effect on local air quality. The effect will be short-term, temporary and imperceptible. Traffic associated with the operational phase will be low creating no potential for interactions with air quality and climate.

The overall conclusion reached in the EIAR is that the interaction of effects is not assessed as likely to result in any effects that would magnify effects through the interaction or accumulation of effects. It is concluded that the effects of the proposed development on the receiving environment is not likely to be significant. A number of positive effects are identified such as community benefits, a reduction in the use of fossil fuels and a significant contribution towards achieving Ireland's national and European targets for energy production from renewable sources.

#### 10.15. Reasoned Conclusion

Having regard to the examination of environmental information contained above, and in particular to the EIAR and further information provided by the applicant, and the submissions from the Planning Authority, observers and prescribed bodies in the course of the application, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

- The main impacts on **population and human health** will arise from emissions to air during the construction and operational stages of the development associated with noise/vibration, impacts on landscape and materials assets (roads and transport). It is considered that these impacts can be effectively mitigated by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR), the Preliminary

Construction and Environment Management Plan and by appropriate landscaping.

Positive impacts on population and human health will arise in terms of benefits to the local economy from increased spending and jobs during the construction stage.

- Impacts on **biodiversity** within the site would not be significant and are capable of effective mitigation by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement.

The habitats that would be impacted are widespread and of low ecological value. No rare or protected plants, mammals or birds were recorded on the site. The loss of hedgerows will be compensated by new planting. There is potential for bat roosts in mature trees within existing hedgerows. Subject to the implementation of the measures set out in the Environmental Impact Assessment Report, the Natura Impact Statement and the Surface Water Management Plan, there will be no significant effects on the main ecological features identified, including the Knockardagur stream, hedgerows and potential bat roosts.

- Subject to the implementation of the measures set out in the Environmental Impact Assessment Report and the Preliminary Construction and Environment Management Plan (CEMP), potential impacts on **land, soil and water** will not be significant. A suite of measures are proposed to protect water quality which are standard best practice. Stormwater discharge will be limited to greenfield run-off rates to ensure no increase in run-off rates entering the environment.
- The impacts on **climate** are assessed as positive associated with the connection of the permitted wind farm to the national transmission system and the generation of renewable energy.
- Potential impacts on **Landscape** will be mitigated by the split-level design of the sub-station, the retention and protection of existing hedgerows and new planting. The impact of the development on the local landscape will be localised and confined to the general environs of the site.

- Potential impacts in terms of **Material Assets** (Transport & Access) will occur primarily during the construction stage. The impacts would include potential damage to road pavement, extended journey time, traffic disruption and inconvenience for local residents. These impacts will be mitigated during construction by the measures set out in the Environmental Impact Assessment Report, the Preliminary Construction and Environment Management Plan (CEMP) and by a Traffic Management Plan to be agreed with the planning authority.
- Potential impacts on **Cultural Heritage** will be mitigated during the construction stage through archaeological monitoring of ground works.

Having regard to the above, I am satisfied that the proposed development, either on its own or cumulatively with any other existing/permitted development would not have any unacceptable direct or indirect effects on the environment.

## 11.0 **Appropriate Assessment**

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

The proposed development is not directly connected to, or necessary to the management of any European site, and therefore is subject to the provisions of Article 6(3) and Part XAB of the Planning and Development Act, 2000, as amended.

### **Stage 1 – Screening for Appropriate Assessment**

The first test of Article 6(3) is to establish if the proposed development could result in likely significant effects to a European site. This is considered Stage 1 of the appropriate assessment process i.e., screening. The screening stage is intended to be a preliminary examination. If the possibility of significant effects cannot be



excluded on the basis of objective information, without extensive investigation or the application of mitigation, a plan or project should be considered to have a likely significant effect and Appropriate Assessment carried out.

The applicant carried out an appropriate assessment screening exercise, which is contained in the Appropriate Assessment Screening Report and Natura Impact Statement submitted with the application. The screening report identifies one European site within the zone of influence of the proposed development, which is the River Barrow and River Nore SAC (Site code 002162). Other European sites considered included Lisbigney Bog SAC (Site code 000869) located c 5.9 km to the south-west of the site and the River Nore SPA (site code 0042330) located c 5.7 km from the site and includes the lower reaches of the Owenbeg River downstream of the site. Lisbigney Bog SAC is designated for *Cladium* Fens and Desmoulin's Whorl Snail. The River Nore SPA is of conservation interest for Kingfisher.

Potential effects on Lisbigney Bog SAC were excluded due to distance, the features for which the site is selected and the lack of connectivity between the development site and the European site. The River Nore SPA was also excluded due to distance and the site does not provide suitable habitat for Kingfisher.

The potential for significant effects on the qualifying interests of the River Barrow and River Nore SAC is identified via the discharge of surface water from the proposed development to the Knockardagur stream, which outfalls to the Owenbeg (Owveg) River which is part of the SAC. While there would be no direct effects on the SAC, the proposed development has the potential to result in indirect effects.

### **Conclusion – Stage I Screening Report**

It is therefore reasonable to conclude that on the basis of the information on the file, which I consider adequate in order to issue a screening determination, 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(s) 000869 and 004233 in view of the site(s) conservation objectives and Appropriate Assessment is not therefore required for these sites. No measures designed or intended to avoid or reduce any harmful effects on a European Site have been relied upon in this screening exercise.

## Stage 2 -Appropriate Assessment

The AA Screening report concluded that it is not possible to rule out the potential for significant effects on the River Barrow and River Nore SAC (Site code 002162) and that a Stage 2 Appropriate Assessment (NIS) was required. The qualifying interests of the SAC are listed below:

European site (SAC/SPA)	Qualifying Interests	Distance
<b>River Barrow and River Nore SAC (Site code: 002162)</b>	<ul style="list-style-type: none"> <li>• Estuaries</li> <li>• Tidal Mudflats and Sandflats</li> <li>• Reefs</li> <li>• <i>Salicornica</i> Mud</li> <li>• Atlantic Salt Meadows</li> <li>• Mediterranean Salt Meadows</li> <li>• Floating River Vegetation</li> <li>• Dry Heath</li> <li>• Hydrophilous Tall Herb Communities</li> <li>• Petrifying Springs*</li> <li>• Old Oak Woodlands</li> <li>• Alluvial Forests*</li> <li>• Desmoulin’s Whorl Snail</li> <li>• Freshwater Pearl Mussel</li> <li>• White-clawed Crayfish</li> <li>• Sea Lamprey</li> <li>• Brook Lamprey</li> <li>• River Lamprey</li> <li>• Twaitte Shad</li> <li>• Atlantic Salmon</li> <li>• Otter</li> <li>• Killarney Fern</li> <li>• Nore Freshwater Pearl Mussel</li> </ul>	1.4km

\*Priority Habitat

### **River Barrow and River Nore SAC (Site code 002162)**

The site consists of the freshwater stretches of the Barrow and Nore River catchments as far upstream as the Slieve Bloom Mountains, and also includes the tidal elements and estuary as far downstream as Creadun Head in Waterford. The Owenbeg (Owvey) is one of the larger tributaries.

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

The site supports other important animal species and those listed in the Irish Red Data Book include Daubenton's Bat, Badger, Irish Hare and Common Frog. It also supports a number of rare plants and invertebrates. The site is of high conservation value for the populations of bird species that use it including a number of E.U Birds Directive Annex 1 species, including Greenland White-fronted Goose, Whooper Swan, Bewick's Swan, Bar-tailed Godwit, Peregrine and Kingfisher.

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

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

### **Natura Impact Statement**

The element of the proposed development identified as having potential to affect the River Barrow and River Nore SAC is the discharge of surface water to the Knockardagur stream during construction and operational phases. The NIS

considers the potential for effects on each of the qualifying interests and the rationale for screening in/out (Table 1).

The majority of the habitats for which the site is selected will not be affected by the proposed development. These include estuarine/marine habitats (*estuaries, mudflats & sandflats, Salornica mud, Atlantic salt meadows and Mediterranean salt meadows*) which are at a considerable remove from the site. Other habitats are screened out due to distance, lack of ecological connectivity (*European dry heaths, Alluvial forests, Old sessile oak woods, Killarney Fern*) or lack of presence within/adjacent to the site (*Hydrophilious tall herb communities*). The proposed development will not affect groundwater levels and there is therefore no potential for effects on *Petrifying Springs* which are groundwater dependent. Effects on *Desmoulins Whorl Snail* are screened out as they occur upstream of the Nore/Owenbeg confluence. *Otter* is screened out due to a lack of suitable habitat within or adjacent to the site.

The NIS concludes that likely significant effects are uncertain in the case of the one habitat (*Floating River Vegetation*) and 8 no. species (*White-clawed Crayfish, Sea, Brook and River Lamprey, Twaite Shad, Salmon, Freshwater Pearl Mussel and Nore Pearl Mussel*).

Floating River vegetation – The full distribution of the habitat is not currently known. The Conservation Objective is to maintain its favourable conservation condition. It has the potential to be impacted by surface water run-off causing a deterioration in water quality.

White-clawed Crayfish – The species is mapped within the Owenbeg (Owveg River) and may be impacted by any potential reduction in water quality due to surface water run-off. The Conservation Objective is to maintain the favourable condition of the species.

Sea, Brook and River Lamprey, Twaite Shad and Salmon – are mobile species using different areas within the SAC for foraging and breeding. Release of suspended solids and other pollutants from the proposed development could cause deterioration of water quality or changes to water chemistry. This has the potential to result in population changes through mortality and/or a reduction in suitable habitat for the species. The Conservation Objective is to restore the favourable condition of these species.

Freshwater Pearl Mussel – status as a qualifying interest of the SAC is under review and no site-specific conservation objectives are provided. Increases in sedimentation and reduction in water quality are known threats to the species.

Nore Pearl Mussel - the species is present downstream of the confluence of the Nore-Owenbeg confluence. A reduction in water quality due to sediment loading poses a threat to this species. The Conservation Objective is to restore its favourable condition.

### **Mitigation measures**

The development site lies outside of the boundaries of the Natura 2000 site and accordingly there is no potential for direct impacts on any site. There is potential for indirect effects associated with hydrological linkages and a deterioration in water quality during construction and operation. The impacts on water quality has the potential to result in negative effects on some qualifying interests of the SAC.

#### Mitigation measures to reduce impacts on water quality

A suite of mitigation measures are proposed to avoid the risk of sediment and other pollutants entering surface water and to protect water quality during the construction and operational stages of the development. The measures outlined are standard best practice for the protection of water quality to prevent sediment release to the Knockardagur stream and to regulate flow to prevent scouring and allow settlement to occur. The measures are set out in detail in the Surface Water Management Plan contained in Annex 3.5 Volume11 of the EIAR and are summarised in section 6.1.5 of the NIS and include source controls, in-line controls and treatment systems.

#### *Construction Stage*

The CEMP will be in place prior to the commencement of construction and will provide site-specific method statements and measures to protect the surface water drainage network. The final CEMP and the SWMP will be submitted to and agreed in writing with the planning authority.

Prior to any site clearance or earthworks, erosion and sediment control will be put in place to protect the Knockardagur stream and other watercourses. Exposed soil will be kept to a minimum to reduce risk of sediment release during rainfall events and vegetation cover will be re-established as soon as practical where soil has been

exposed. Silt traps/settlement ponds and temporary interceptors and traps will be put in place prior to site clearance/earthworks and will be used until such time as permanent facilities are constructed. Surface water will pass through interception such as silt traps to ensure suspended solids will not reach watercourses. Measures will also be employed to prevent other deleterious matter from entering into watercourses including appropriate storage of fuel and hazardous material, application of buffer zones for fuelling. The attenuation ponds will be designed to accommodate greenfield run-off rates plus 20% for climate change.

The potential increase in suspended solids as a result of the proposed development could affect freshwater pearl mussel, including the Nore pearl mussel, downstream. The NIS refers to research carried out by Altmuller and Dettmer (2006) which is detailed in the SWMP that includes specific measures to protect pearl mussel populations. The measures include the installation of sediment traps in drainage ditches to reduce siltation of watercourses. It is proposed to adopt these measures in accordance with the characteristics of the site and to place Disturbed Sediment Entrainment Mats (SEDIMATS) in the Knockardagur stream to further reduce potential siltation of the watercourse.

#### *Operational Stage*

The primary risk to water quality during the operational stage would be from hydrocarbon/chemical spillage. Standard best practice measures would be adopted including the appropriate storage and bunding of hazardous materials, the availability of spill kits and disposal of materials to registered waste disposal contractor.

The increase in hardstanding and roofing has the potential to increase run-off. Surface water would be discharged to ground via hydrocarbon interceptors and soakaways. I note that the substation will not be provided with a hard surface and rainfall will percolate to ground. It is intended that discharges would be limited to greenfield run-off rates and attenuated using sediment control infrastructure to ensure that no deleterious material is discharged. These measures are designed to ensure that the existing hydrological regime is not altered, and that water quality is protected.

Subject to the implementation of the suite of mitigation measures proposed to protect water quality and attenuate flows, I accept that the proposed development is not

likely to impact on the habitats and species for which the SAC is selected. I accept the conclusions reached in the NIS that following an examination, evaluation and analysis, in light of the best scientific knowledge and on the basis of objective information, having taken into account the relevant mitigation measures, it can be concluded that the proposed development will not have any significant adverse effects on the River Barrow and River Nore SAC (Site code 002162).

### **Assessment**

The DAU raised issues regarding the proposed surface water system and its effectiveness in terms of protecting water quality during the construction and operational stages of the development. I accept that the applicant's response is robust and I am satisfied in relation to the precautionary approach adopted with regard to Knockardagur Stream and adjacent drainage ditches.

No instream works are proposed and the development is designed to avoid the stream and other water courses. While the site inspections suggest that the stream is dry or carries very low flows, the precautionary approach is adopted which assumes that flow rates are sufficient to comprise a hydrological connection with the SAC. In addition to the extensive suite of mitigation measures proposed in the EIAR, a revised set of drawings submitted with the applicants response (Annex 1) illustrates an indicative layout of the proposed surface water management system, incorporating additional measures to prevent siltation, increased sediment loading and other pollutants from entering the stream. These include in-line silt traps within the drainage ditch to be crossed by the proposed site entrance and additional silt fences and clean water collector drains to the west of the site. The physical site constraints do not allow for the specific 10m buffering suggested by the DAU. I am satisfied that subject to the effective implementation of the suite of mitigation measures proposed and effective monitoring, a 10m buffer zone is not necessary.

I would also point out to the Board that additional measures are proposed to protect Nore Freshwater Pearl Mussel as detailed in the EIAR and applicant's response. The provision of additional settlement lagoons as proposed will provide increased attenuation of surface water prior to discharge and ensure that silt, sediment and other pollutants are not discharged from the site. I accept that the detailed design of

the settlement ponds/lagoons can be finalised prior to construction in agreement with the planning authority.

Subject to the implementation of these measures which are proven best practice, I do not consider that the proposed development will significant impact on water quality and adversely affect the integrity of the SAC.

### **Conclusion on Appropriate Assessment**

The proposed development has been considered in light of the assessment requirements of sections 177U and 177V of the Planning and Development Act 2000 as amended.

Having carried screening for Appropriate Assessment of the proposed development, it was concluded that based on the precautionary principle and taking a precautionary approach, significant effects could not be ruled out on the River Barrow and River Nore SAC (site code 002162). Consequently, an Appropriate Assessment was required of the implications of the project on the qualifying features of that site in light of its conservation objectives.

Following an Appropriate Assessment, it has been determined that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European Site No 002162, or any other European site, in view of the sites Conservation Objectives.

This conclusion is based on:

- Prevention of possible construction related pollutants entering the River Owenbeg (Owveg)River system by effective mitigation measures;
- Prevention of possible operational pollutants entering the Owenbeg (Owveg) River system by effective mitigation measures including monitoring controls.

This conclusion is based on a complete assessment of all aspects of the proposed project and there is no reasonable doubt as to the absence of adverse effects.



## 12.0 Recommendation

On the basis of the above assessment, I recommend that the Board should grant permission for the proposed development for the reasons and considerations set out below.

## 13.0 Reasons and Considerations (Draft Order)

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

- the nature, location, scale and extent of the proposed development,
- the proximity of the site to the permitted Laois-Kilkenny Grid Reinforcement Project electricity transmission line,
- the decisions made in respect of an appropriate assessment
- the national target to have 70% of electricity generated from renewable sources by 2030
- national and local policy support for developing renewable energy, in particular the:-
  - Government's Strategy for Renewable Energy 2012-2020
  - The National Planning Framework, Project Ireland 2040
  - Delivering a Sustainable Future for Ireland – the Energy Policy Framework, 2007-2020
  - Climate Action Plan, 2019
  - Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure 2012,
  - Eastern and Midlands Regional Spatial and Economic Strategy 2019-2031,
  - the provisions as set out in the Laois County Development 2017-2023, including those regarding renewable energy development set out in within the Wind Energy Strategy.

- the purpose of the proposal as enabling infrastructure for the permitted windfarm,
- the pattern of development in the area (including the separation distance to dwellings and the pattern of permitted development in the area,
- the submissions on the file including that from the Planning Authority,
- the documentation submitted with the application, including the Appropriate Assessment Report (Screening and Natura Impact Statement) and the Environmental Impact Assessment Report,
- the report of the Inspector,
- The likely consequences for the environment and the proposer planning and sustainable development of the area in which it is proposed to carry out the proposed development and the likely effects of the proposed development on European Sites.

### **Appropriate Assessment: Stage 1**

The Board agreed with and adopted the screening assessment and conclusions carried out in the Inspector's report that the only European sites in respect of which the proposed development has the potential to have significant effects is the River Barrow and River Nore SAC (Site code: 002162).

### **Appropriate Assessment: Stage 2**

The Board considered the Natura Impact Statement and all other relevant submissions and carried out an appropriate assessment of the implications of the proposed development for the aforementioned European Site in view of the Sites' Conservation Objectives. The Board considered that the information before it was adequate to allow for a complete assessment of all aspects of the proposed development and to allow them reach complete, precise and definitive conclusions for appropriate assessment.

In completing the Appropriate Assessment, the Board considered, in particular, the following:

- i. the likely direct and indirect impacts arising from the proposed development both individually and in combination with other plans or projects,

- ii. the mitigation measures which are included as part of the current proposal,
- iii. the Conservation Objectives for the European Site, and
- iv. the submissions from the planning authority, the observers and prescribed bodies in the course of the application.

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 Sites, in view of the site's Conservation Objectives and there is no reasonable doubt remaining as to the absence of such effects.

**Environmental Impact Assessment:**

The Board completed an environmental impact assessment of the proposed development taking account of:

- (a) the nature, scale and extent of the proposed development,
- (b) the Environmental Impact Assessment Report and associated documentation submitted in support of the planning application,
- (c) the submissions from the planning authority, the observers and prescribed bodies in the course of the application, and
- (d) the Inspector's report.

The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers alternatives and identifies and describes adequately the direct, indirect and cumulative effects of the proposed development on the environment. The Board agreed with the examination, set out in the Inspector's report, of the information contained in the Environmental Impact Assessment Report and associated documentation submitted by the applicant and submission made in the course of the application. The Board considers that the main significant direct and indirect effects of the proposed development on the environment are those arising from the impacts listed below.

## Reasoned Conclusions on the Significant Effects

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

- The main impacts on **population and human health** will arise from emissions to air during the construction and operational stages of the development associated with noise/vibration, impacts on landscape and materials assets (roads and transport). It is considered that these impacts can be effectively mitigated by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR), the Preliminary Construction and Environment Management Plan and by appropriate landscaping.

Positive impacts on population and human health will arise in terms of benefits to the local economy from increased spending and jobs during the construction stage.

- Impacts on **biodiversity** within the site would not be significant and are capable of effective mitigation by the implementation of the measures set out in the Environmental Impact Assessment Report (EIAR) and the Natura Impact Statement.

The habitats that would be impacted are widespread and of low ecological value. No rare or protected plants, mammals or birds were recorded on the site. The loss of hedgerows will be compensated by new planting. There is potential for bat roosts in mature trees within existing hedgerows. Subject to the implementation of the measures set out in the Environmental Impact Assessment Report, the Natura Impact Statement and the Surface Water Management Plan, there will be no significant effects on the main ecological features identified, including the Knockardagur stream, hedgerows, and potential bat roosts.

- Subject to the implementation of the measures set out in the Environmental Impact Assessment Report and the Preliminary Construction and Environment Management Plan (CEMP), potential impacts on **land, soil and water** will not be significant. A suite of measures are proposed to protect water quality which are standard best practice. Stormwater discharge will be

limited to greenfield run-off rates to ensure no increase in run-off rates entering the environment.

- The impacts on **climate** are assessed as positive associated with the connection of the permitted wind farm to the national transmission system and the generation of renewable energy.
- Potential impacts on **Landscape** will be mitigated by the split-level design of the sub-station, the retention and protection of existing hedgerows and new planting. The impact of the development on the local landscape will be localised and confined to the general environs of the site.
- Potential impacts in terms of **Material Assets** (Transport & Access) will occur primarily during the construction stage. The impacts would include potential damage to road pavement, extended journey time, traffic disruption and inconvenience for local residents. These impacts will be mitigated during construction by the measures set out in the Environmental Impact Assessment Report, the Preliminary Construction and Environment Management Plan (CEMP) and by a Traffic Management Plan to be agreed with the planning authority.
- Potential impacts on **Cultural Heritage** will be mitigated during the construction stage through archaeological monitoring of ground works.

The Board is satisfied that the reasoned conclusion is up to date at the time of making the decision.

The Board completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures proposed as set out in the Environmental Impact Assessment Report, and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be acceptable. In doing so, the Board adopted the report and conclusions set out in the Inspector's report.

Having considered the totality of the Environmental Impact Assessment Report, the associated documentation submitted with the application and the report of the

Inspector, the Board concluded that any likely significant effects on the environment would be mitigated by the mitigation measures proposed by the applicant.

### **Proper Planning and Sustainable Development**

It is considered that subject to the conditions set out below, the proposed development would be in accordance with European and national energy policies, the National Planning Framework and the relevant provisions of the Laois County Development Plan 2017-2023 and would:

- (a) make a positive contribution to Ireland's national strategic policy on renewable energy and its move to a low carbon future, and
- (b) have an acceptable impact on the environment and on the amenities of the area.

The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

## **14.0 Conditions**

1. The proposed development shall be carried out and completed in accordance with the plans and particulars lodged with the application, and the further plans and particulars received by the Board on the 18<sup>th</sup> day of June 2021, 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 proposed development shall be carried out and completed in accordance with agreed particulars. In default of agreement, such matters shall be referred to An Bord Pleanála for determination.

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

2. The mitigation measures and monitoring commitments identified in the Environmental Impact Assessment Report and other plans and particulars submitted with the application shall be implemented in full.

**Reason:** In the interests of clarity and the protection of the environment during the construction and operational phases of the proposed development.

3. The mitigation measures contained in the Natura Impact Statement submitted with the application and the other plans and particulars submitted with the application shall be implemented in full.

**Reason:** In the interest of clarity and the proper planning and sustainable development of the area and to ensure the protection of European sites.

4. The period during which the proposed development hereby permitted may be constructed shall be 10 years from the date of this Order.

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

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

- (a) notify the planning authority in writing at least four weeks prior to the commencement of any site operation (including hydrological and geotechnical investigations) in relation to the development,
- (b) employ a suitably qualified archaeologist who shall monitor all site investigations and other excavation works.
- (c) provide arrangements, acceptable to the planning authority, for the recording and for the removal of any archaeological material which the authority considers appropriate to remove.

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

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

- (a) No additional artificial lighting shall be installed or operated on site unless authorised by a prior grant of permission.
- (b) The substation and all related ancillary structures shall be dark green in colour.

**Reason:** In the interests of clarity and of visual and residential amenity.

6. (a) During the operational phase of the proposed development, the noise level arising from the development, as measured at the nearest noise sensitive location shall not exceed:
- (i) An LAeqT value of 55 dB(A) during the period 0800 to 2200 hours from Monday to Saturday inclusive [The T value shall be one hour]
  - (ii) An LAeqT value of 45 dB(A) at any other time. [The T value shall be 15 minutes]. The noise at such time shall not contain a tonal component.

At no time shall the noise generated on site result in an increase in noise level of more than 10 dB(A) above background levels at the boundary of the site.

- (b) All sound measurement shall be carried out in accordance with ISO Recommendation R 199 “Assessment of Noise with respect to Community Response” as amended by ISO Recommendations R 1996 1,2 or 3 “Description and Measurement of Environmental Noise “ as applicable.

**Reason:** To protect the amenities of property in the vicinity.

7. The developer shall retain the services of a suitably qualified and experienced bat specialist to survey trees to be removed for the presence of bat roosts prior to commencement of development. The removal of any roosts identified shall be carried out only under licence from the National Parks and Wildlife Service

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



8. Details of the landscaping around the proposed substation and alongside the proposed access roadway to the substation, shall be submitted to and agreed in writing with, the planning authority prior to commencement of the development. The proposed planting scheme which shall include details of the number, age and species to include native deciduous species together with proposals for the protection of trees/hedgerows to be retained and for future maintenance.

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

9. The proposed entrance with the public road shall comply with the detailed standards of the planning authority for such road works.

**Reason:** In the Interests of amenity and traffic safety.

10. Water supply and drainage arrangements, including the disposal of surface water and wastewater, shall comply with the requirements of the planning authority for such works and services.

**Reason:** In the interests of public health.

11. Prior to commencement of development a Surface Water Management Plan shall be submitted for written agreement with the planning authority. The plan shall include details of the layout and specifications of surface water management infrastructure, including the detailed design of the settlement ponds/lagoons. The plan shall include a Water Quality and Monitoring Plan to ensure the effective operation of the measures to protect water quality. An Ecological Clerk of Works shall be appointed to supervise the implementation of the water protection measures and report on compliance.

**Reason:** To protect water quality

12. Prior to commencement of development, a detailed Construction Management Plan for the construction stage shall be submitted to and agreed in writing with the planning authority. The Construction Management Plan shall incorporate the following:

(a) a detailed plan for the construction phase incorporating inter alia,

(b) construction programme, supervisory measures, noise management measures, traffic management and road restoration measures, construction hours and the management of construction waste

(b) a comprehensive programme for the implementation of all monitoring commitments made in the application and supporting documentation during the construction period,

(c) invasive species management plan.

(d) an emergency response plan, and

(e) proposals in relation to public information and communication.

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

In the event that the proposed development is being developed concurrently with any other development in the area, the developer shall consult with and arrange suitable traffic phasing arrangements with the planning authority,

**Reason:** In the interests of environmental protection and orderly development.

13. All road surfaces, culverts, bridges, watercourses and verges shall be protected during construction and, in the case of any damage occurring shall be reinstated to the satisfaction of the planning authority. Prior to commencement of development, a road condition survey shall be undertaken to provide a basis for the reinstatement works. Details in this regard shall be submitted to and agreed in writing with the planning authority prior to commencement of development.

**Reason:** In order to ensure a satisfactory standard of development.

- 15 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 security shall be agreed between the planning authority and the developer or, in default of agreement, shall be referred to An Bord Pleanála for determination.

**Reason:** To ensure a satisfactory standard of development.

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Breda Gannon

Senior Planning Inspector

11<sup>th</sup> August 2021