



An  
Bord  
Pleanála

## Inspector's Report

**ABP-301959-18**

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### Development

An 110kV electrical substation and 110kV underground electrical cabling from the proposed substation to an already consented windfarm and all ancillary works.

### Location

Townland of Mountphilips, near Newport, and townland of Knockcurraghbola, near Upperchurch, Co. Tipperary

### Planning Authority

Tipperary County Council

### Applicant

Eco Power Developments

### Type of Application

Application under the provisions of 182A of the Planning and Development Act 2000 (as amended)

### Observers

Tipperary County Council

Department of Culture, Heritage and the Gaeltacht, Development Applications Unit

Inland Fisheries Ireland

Emer Ó Siochrú and Toal Ó Muire

James and Tanya Embleton

Ned and Carmel Buckley

Gerard Ryan

Paul and Edel Grace

**Date of Site Inspection**

14<sup>th</sup> November 2018

**Inspector**

Erika Casey

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## 1.0 Introduction

- 1.1 An application has been made under the provisions of Section 182A of the Planning and Development Act 2000 (as amended) for the development of an 110kV electrical substation and 110kV underground electrical cabling from the proposed substation to a previously consented windfarm and all ancillary works. The subject application is referred to as the UWF Grid Connection and the consented Upperchurch Windfarm is called the UWF in the application documentation. The windfarm was permitted under Application Reference 1351003/Appeal Reference 243040 in 2014 and comprises 22 no. wind turbines and an electrical substation. It has not yet been constructed. The purpose of the UWF Grid Connection is to connect the permitted UWF Substation at the Upperchurch Windfarm to the proposed substation at Mountphilips. The Mountphilips Substation will be connected to the existing adjacent Killonan-Nenagh 110kV overhead line and thus export electricity from the windfarm when constructed and operational to the national grid.
- 1.2 Pre application consultations were initiated on behalf of the applicant to assess whether or not the proposed substation and underground electrical cable constituted strategic infrastructure under the provisions of the Act. On foot of an assessment and recommendation from the reporting inspector that the proposed development did constitute strategic infrastructure within the meaning of the acts, the Board issued a direction in January 2018 stating that the proposal constitutes strategic infrastructure. The Board Direction noted that other associated works relating to the permitted windfarm did not constitute strategic infrastructure development and ought to be subject to a separate planning application to the local authority.
- 1.3 On foot of this determination by the Board that the development is a strategic infrastructure development, the applicant submitted an application under the provisions of Section 182A of the Planning and Development Act 2000 (as amended) on the 28<sup>th</sup> of June 2018. The application is accompanied by an Environmental Impact Assessment Report and a Natura Impact Statement.
- 1.4 A separate planning application (Planning Authority Reference 18/60/0913) has been made to Tipperary County Council for related works including internal windfarm

cabling, realigned windfarm roads, haul route roads, telecom relay pole and ancillary works. Further Information was requested on this application and a response from the applicant was submitted on the 9<sup>th</sup> November 2011. The decision is due 12th January 2019.

## 2.0 Site Location and Description

- 2.1. The proposed substation at Mountphilips is located on agricultural lands adjacent to the existing Killonan-Nenagh 110kV overhead line. It is sited c. 2km north of Newport, 4km south of Birdhill and 23km west of the permitted Upperchurch Windfarm.
- 2.2. The 110kV underground cable will connect the Mountphilips Substation to the Upperchurch Windfarm and associated substation through the installation of underground cables. The route of the underground cables, which is 27.5km in length, will follow a generally west/east course through agricultural grassland (11.9km), commercial forestry plantations (1.9km), private forestry and farm roads (c. 12km) and public roads (c. 1.7km). The route of the cable will travel through the townlands of Mountphilips, Coole, Freagh, Oakhampton, Newross, Castlewaller, Killeen, Knockacullin, Bealaclave, Baurnadomeeny, Goulmore, Laghile, Churchquarter, Knocknabansha, Knockmaroe, Knockcurraghbola Crownlands and Knockcurraghbola Commons.



## 3.0 Proposed Development

### UWF Grid Connection

3.1. The proposed UWF Grid Connection development comprises the following constituent elements:

#### Mountphilips Substation

3.1.1 The 110kV electrical substation will comprise:

- 2 no. endmasts located at the Killonan – Nenagh 110kV overhead line. The end masts will be lattice towers and will be c. 16m in height.
- A compound located 230 metres east of the overhead line measuring c. 95 metres by 94 metres which will accommodate a control building (205 sq. metres). The control building will accommodate circuit breakers, electrical metering equipment and other electrical equipment, communications and control equipment and welfare facilities including a self-contained toilet and integrated rainwater harvesting system.
- 110kV busbars.
- Circuit breakers.
- Line disconnects, current and voltage measuring equipment.
- Cable chairs.
- Surge arresters.
- Lightning protection monopoles and other electrical apparatus.
- Underground cabling and access roads.

3.1.2 The 2 no. end masts will be connected to the electrical equipment in the compound via underground cable. Secure perimeter fencing comprising 2.7m high palisade fencing will surround the substation compound.

#### Mountphilips to Upperchurch 110kV Underground Cable

3.1.3 The 27.5km underground cable will be installed in trenches (1.25m deep and 0.6m wide) which will be laid with ducts through which electrical cables and

communications cables will be pulled. The cable lengths will be pulled through and joined together at joint bay locations, in joint bay chambers (38 no.). The ducts will be surrounded by concrete and the trench backfilled with excavated material or aggregate depending on the location. The only surface expression of the 110kV underground cable will be the manhole type covers over the joint bays and the over ground identification marker posts and marker plates.

- 3.1.4 Road works will be required along the 110kV UGC where the route crosses or is aligned along the public road network. There will be no joint bays along the public road corridor and road works will be limited to the cables trench. In total, there are 13 no. locations where trenching will occur within the road corridor.

#### Upperchurch Wind Farm Grid Connection Access Road

- 3.1.5 To facilitate access to Mountphilips Substation, the joint bay locations and construction work areas along the cable route, new permanent access roads will be constructed at Mountphilips and at various locations along the route of the underground cable. Other access roads, including existing farm and forestry roads will be upgraded. UWF Grid Connection access roads will consist of 8.1km of existing private roads, which will require upgrading, along with 4.4km of newly constructed permanent access roads.

- 3.1.6 The new access roads are required by ESB networks to gain access to joint bay locations. 2.7km of the roads will be located outside the boundary of the Slievefelim to Silvermines Mountains SPA, generally in agricultural fields. The new roads will be bounded with new earthen berms which will be planted with a mix of grassed and native hedgerow species.

- 3.1.7 The remaining 1.7km of new permanent access roads will be located inside the boundary of the SPA. All the new roads within the SPA will be concealed beneath vegetation directly after construction to be called concealed access roads. This will be achieved by laying rigid geocell paving material over the stone road, filled with peat/soil and planted with heather and grasses. The vegetation mix will reflect the land cover which existed prior to construction and comprise a heather and grass mix. Already matured heather and grass plants will be used.

#### Upperchurch Wind Farm Grid Connection Ancillary Works

3.1.8 These works will support the construction of the UWF Grid Connection and will include:

- The construction of temporary access roads (9.3km in length) along the 110kV underground cable construction works areas.
- Permanent site entrances (including the provision of sightlines) will be provided through existing farm entrances at Mountphilips, Bealaclave and Knockcurraghbola Commons.
- Temporary site entrances at public road crossings along the 110kV underground cable: A total of 25 no. temporary site entrances will be required, 20 no. through existing farm or forestry entrances and the remaining 5 comprising new entrances through the roadside boundary.
- Installation of temporary and permanent watercourse crossing structures (90 in total). No instream works are proposed for the Newport (Mulkear), Bilboa or Clare Rivers. These will be crossed by a directional drilling technique.
- Construction and use of 3 no. temporary compounds to support the construction of the grid connection. These compounds will be provided at the Mountphilips Substation location (1,090 sq. metres), approximately halfway along the Mountphilips-Upperchurch 110kV UGC at Bealaclave (860 sq. metres) and adjacent to the consented UWF substation location (860 sq. metres). The compounds will accommodate parking, site offices, canteen and welfare facilities and designated areas for materials, wastes, oils and fuels.
- Installation of drainage systems at Mountphilips Substation, around temporary compounds and along new Upperchurch Windfarm Grid Connection Access Road.
- Forestry felling: In total 1.3 hectares of forestry will be felled under a licence from the Forest Service. An equivalent area of forestry will be replanted. This replanting will be part of the UWF Replacement Forestry element of the whole UWF project.
- Temporary and permanent hedgerow/tree removal and permanent hedgerow replanting.

- Permanent and temporary fencing: The permanent fencing comprises timber and post rail fencing with gates along the new permanent access road to the Mountphilips Substation, at the 3 no. permanently widened site entrances and along either side of the 110kV UGC where the route passes through forestry or forestry firebreaks/clearlines.
- Relocation of 2 no. existing overhead electricity and telephone services.
- Storage of excavated materials at various locations within the construction works area boundary. A total of 14,050m<sup>3</sup> of geological material will be excavated, mainly arising from UGC trenching/joint bays, Mountphilips Substation ground works and grid connection related access roads. 8,370m<sup>3</sup> of the excavated material will be permanently stored along the 110kV UGC works area as linear berms and remainder (5,020m<sup>3</sup>) will be reinstated within the works area. 660m<sup>3</sup> of spoil from the public road excavation will be removed to a licenced facility.
- Provision of electricity supply to Mountphilips Substation.
- Reinstatement of construction works areas: Following completion of construction works in an area, with the exception of new permanent infrastructure such as new permanent access roads or permanently felled forestry areas, the lands under construction works areas will be reinstated to their former condition and returned to the landowner.
- Reinstatement of public roads.

### **Whole Upperchurch Windfarm Project**

3.1.9 The Board should be aware that the subject application forms part of an overall project which is referred to in the application documentation as the Whole Upperchurch Windfarm Project. The other elements of the project comprise:

#### Upperchurch Windfarm Related Works

3.1.10 There is a concurrent application (Planning Authority Reference 18/60/0913) currently under consideration by Tipperary County Council for a development comprising:

- Internal windfarm cabling (17.9km in length): to connect the consented UWF Turbines to the consented UWF substation. The majority (11.1km) of the internal windfarm cabling will be installed under consented windfarm roads or realigned windfarm roads. The remainder will be installed in agricultural lands, forestry lands and crossings under 9 no. public roads.
- Realigned windfarm roads: to realign two lengths of consented UWF roads and to provide access to a new telecom relay pole. The consented windfarm road to turbine no. 5 is 560m in length, and will replace this road in its entirety with a new road 230m in length through forestry. This will require forestry felling of 0.2 ha. The consented wind farm road between turbine no. 19, no. 20 and 21 is 840 m in length. It will replace 370m of this road with a new road also 370m in length. A short length (30m) of new access road is between the consented windfarm roads in Knockmaroe to the new telecom relay pole.
- Haul route works: To facilitate the haulage of the large turbine components such as towers and blades to the Upperchurch Windfarm site. Works include the removal of soils and laying of crushed stone and hard core in roadside edges, temporary removal and reinstatement of hedgerow and earthen banks which form roadside boundaries, permanent removal of roadside boundary and construction of temporary access roads on private lands.
- Telecom Relay Pole: 18m wooden pole to be erected in order to carry out telecoms and relay equipment, which will solve the interference with communication links impacts from operational consented UWF turbines on the communication signals between Foilnaman Mast and Laghtirseefin Mast. A small compound 25m<sup>2</sup> in size will enclose the pole, along with a ground based outdoor cabinet and ancillary equipment.
- RW Ancillary Works: Will facilitate the construction of the development and will include temporary access roads (5,300m); temporary and permanent watercourse crossings (involving 24 no. small field drains and 8 no. streams); temporary site entrances (14 no.); change of use at the entrance to the UWF Replacement Forestry; drainage systems around permanent features and temporary drainage around work areas; forestry felling (0.3ha); temporary and permanent hedgerow/tree removal; permanent hedgerow replanting; fencing;

relocation of existing telephone poles (5 no.); temporary storage of excavated materials (11,830m<sup>3</sup>) at various locations within construction works area boundaries and reinstatement of roadside boundaries and public road surfaces.

3.1.11 A decision on this application is due on the 12<sup>th</sup> of January 2019.

#### Upperchurch Windfarm Replacement Forestry

3.1.12 A separate Afforestation Licence Application (Reference CN81893) to the Minister of Agriculture, Food and the Marine for Upperchurch Windfarm Replacement Forestry has been made. It is proposed to plant 6 hectares of forestry comprising native tree and shrub species on two adjoining parcels of agricultural lands in Foilnaman townland near the village of Upperchurch in Co. Tipperary. The UWF Replacement Forestry will fulfil the replanting obligation which will arise from the felling of forestry for the development of some of the other elements of the Whole Upperchurch Windfarm Project including the Upperchurch Windfarm Grid Connection, the Upperchurch Windfarm Related Works and the Upperchurch Windfarm itself. As noted above, 1.3 hectares of forestry will be felled to facilitate the grid connection and an equivalent area of forestry will be replanted as part of the UWF Replacement Forestry element of the whole UWF project.

#### Upperchurch Windfarm Other Activities

3.1.13 These activities do not require planning permission but are considered in the application as part of the overall cumulative assessment of the Whole Upperchurch Windfarm Project. The activities include haul route activities, Upperchurch Hen Harrier Scheme, monitoring activities and overhead line activities. A full description of these activities is set out in Appendix 5.6 of the EIAR and is summarised below:

Haul Route Activities: will facilitate the transportation of turbine components to the Upperchurch Windfarm site and are located at various points on the national and regional road network along the UWF turbine component haul route between Foynes Port in Co. Limerick and junction of the R503 and R497 Regional Roads in Knockmaroe townland, Co. Limerick. Activities comprise the laying of matting over verges at up to 5 no. locations, removal of street furniture (mainly signposts) and trimming of hedgerows/trees etc.

Upperchurch Hen Harrier Scheme: will enhance and protect habitat for the hen harrier in the vicinity of Upperchurch Windfarm, in order to fulfil planning condition

no. 18 of the windfarm permission. The area of the scheme is 128ha and activities will include planting of hedgerows and trees, enhancement of riparian corridors, fencing of watercourses etc.

Monitoring Activities: will monitor the Whole UWF Project for compliance with the environmental protection measures and mitigation measures.

Overhead Line Activities: include re-sagging activities and fibre wrapping activities. The purpose of the re-sagging activities is to correct the tension of the existing overhead line, following installations of the UWF Grid Connection end masts, so that the line is held within predefined tension parameters. The purpose of fibre wrapping is to provide a communication link to the newly installed Mountphilips Substation.

#### Upperchurch Windfarm

- 3.1.14 This element of the whole project comprises the windfarm development. Permission has been granted for 22 no. turbines with an overall height of 126.6 metres, 2 meteorological masts with an overall height of up to 80 metres, turbine foundation and crane hardstanding, access roads and an electrical substation. Full details of this consented application are set out in the planning history section of this report.
- 3.1.15 It is detailed in the application documentation that the purpose of the UWF Grid Connection, UWF Related Works, UWF Replacement Forestry and UWF Other Activities is to facilitate the construction and operation of the previously permitted Upperchurch Windfarm. The windfarm when operational will produce electricity from wind to supply the National Grid. The EIAR submitted in support of the current application before the Board considers the cumulative impact of all elements of the Whole Upperchurch Windfarm Project. EIA reports have been prepared to accompany the concurrent applications for the UWF Related Works and UWF Replacement Forestry. Copies of this documentation accompanies the current application for reference.

## 4.0 Planning History

### **Planning Authority Reference 13/510003/An Bord Pleanála Reference 243040**

- 4.1 Under ABP Reference 243040, a 10 year permission was granted on the 12<sup>th</sup> of August 2014 for a site at:  
Graniera/Shevry/Knockcurraghbola/Commons/Knockmaroe/Grousehall/Cummer/Foilna man/Gleninchaveigh/Coumnageeha/Coumbeg/Knocknamena  
Commons/Glenbeg/Seskin, Upperchurch, County Tipperary for a development comprising:

**Turbines:** 22 no. wind turbines of the three bladed, tubular tower model, light grey in colour and an overall height to blade tip up to 126.6m. The turbines will be constructed on concrete bases with an adjacent hard core hardstand areas.

**Substation:** 110kV substation compound to include a control building, main transformer and other electrical equipment enclosed in a compound by palisade fence. The substation will measure 64m by 41m.

**Windfarm Roads:** 11.6km of windfarm access roads comprising 8km of newly built 5m wide roads and 3.6km of existing farm roads which will require upgrading and widening.

**Ancillary Works:** 2 no. meteorological masts up to 80m in height, 11 no. site entrances, 1 no. stream crossing, site drainage system, 2 no. construction compounds, 6 no. borrow pits, forestry felling, hedgerow removal and reinstatement; excavation, storage and reinstatement of soils.

- 4.2 The Board considered that, subject to compliance with the conditions set out below, the proposed development would not seriously injure the amenities of the area or of property in the vicinity, would not be prejudicial to public health and would be acceptable in terms of traffic safety and convenience. The Board further considered that, notwithstanding the cumulative visual impact of the proposal, that the receiving landscape was such that the proposal would be acceptable. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.



### **Application Reference 18/60/0913**

- 4.3 As detailed above, there is currently an application for Upperchurch Windfarm Related Works under consideration by Tipperary County Council. The UWF Related Works comprise 17.9km internal windfarm cabling, realigned windfarm roads, haul route works, telecom relay pole, change of use of existing agricultural entrance to agricultural and forestry entrance and ancillary works.
- 4.4 Further information on this application was requested by the Council on the 10<sup>th</sup> of September 2018 and a response submitted on the 9<sup>th</sup> of November 2018. A decision is due on the 12<sup>th</sup> of January 2019. The Further Information Request related to the following matters:
- The NIS has excluded through the process of screening, both the UWF Replacement Forestry and the Upperchurch Windfarm itself from the Stage 2 of the Appropriate Assessment. Excluding these elements of the overall windfarm project at Stage 1 in close proximity to the SPA does not subsequently allow for cumulative impacts of these projects to be adequately assessed. The applicant is requested to address this issue.
  - The applicants is advised that the Planning Authority is not satisfied as to the completeness of the EIAR submitted as the EIAR relies upon the EIS and EIA of the 2013 application in the presentation of cumulative effect. The applicant is requested to consider the impact of time since the collation of same and provide any update and revisions accordingly.
  - Applicant requested to submit a comprehensive schedule of features/measures to avoid, prevent or reduce/offset adverse effects on the environment; schedule of monitoring measures; schedule of compensatory measures.
  - Additional information regarding schedule and road network map of all public roads to be affected by the haulage operations and construction traffic; schedule and map of all new entrances and amendments to existing entrances and plan indicating appropriate sightlines, set back and forward stopping distances etc. and proposals to upgrade the junction of the R497/L2264-50/R503.

## 5.0 Submission of Application for Approval to An Bord Pleanála

### 5.1 Introduction

5.1.1 An application to An Bord Pleanála was submitted for planning approval under the provisions of S182A of the Act. The application was accompanied by the following information:

- Complete planning application form.
- Detailed drawings.
- Copies of the site notice erected on site and the published newspaper notice.
- Letters of consent from relevant landowners.
- A list of prescribed bodies to which details of the application were sent.
- Environmental Impact Assessment Report including a Non Technical Summary.
- Natura Impact Statement.
- Environmental Management Plan for UWF Grid Connection.
- Reference Documents including:
  - UWF Related Works EIA Report including Non-Technical Summary.
  - Environmental Management Plan for the UWF Related Works.
  - UWF Replacement Forestry EIA Report including Non-Technical Summary.
  - Upperchurch Windfarm EIS 2013.
  - Response to Request for Further Information Planning Authority Reference 13/510003.
  - ABP Inspector's Report/Board Order regarding ABP Reference 243040.

5.1.2 In accordance with the provisions of Section 181A (4) (b), Tipperary County Council was served with a copy of the application. The following prescribed bodies were also served:

- Minister for Culture, Heritage and the Gaeltacht.
- Minister for Communication, Climate Action and Environment.
- Transport Infrastructure Ireland.
- An Taisce.
- The Heritage Council.
- Inland Fisheries Ireland.

- The Commission for Energy Regulation.
- Health Service Executive.
- Environmental protection Agency.
- IDA Ireland.
- Irish Water.
- Waterways Ireland.
- Coillte.
- Office of Public Works.

## 5.2 **Written Submissions/Observations submitted to the Board**

### 5.2.1 **Planning Authority**

#### **Tipperary County Council (22.08.2018)**

- The site contains one entry on the Tipperary County Council list of Protected Structures – RPS Ref S798. It also contains or adjoins 5 other National Monuments.
- The Landscape Character Assessment of Tipperary 2016 is the relevant document in considering the proposed development in the receiving landscape, noting that the proposed substation is located north of Newport in LCA 12 as a transitional landscape.
- Environment Section advise that in general, environmental and ecological issues have been comprehensively dealt with and provided that all proposed mitigation measures and recommendations are to be enacted (as per the Environmental Management Plan and the Natura Impact Assessment), cannot foresee any major environmental issues arising during the construction and operational phases of development.
- The purpose of the proposed development is to connect Upperchurch Windfarm Substation (already permitted) to the National Grid via the proposed new substation at Mountphilips, and thereby, export electricity from Upperchurch Windfarm when constructed and operational. As such, the Planning Authority considers the proposed development as enabling works to an already permitted development and so would view the principle of same favourably. Suggest a number of conditions to be imposed should ABP consider the application favourably.

## 5.2.2 Prescribed Bodies

### **Department of Culture, Heritage and the Gaeltacht (23.08.2018)**

- Sets out archaeological heritage recommendations. States that whilst watercourses within the footprint of the cable routes have been visually inspected, that they have not been subject of a metal detector survey. Notes that sites like fording points have high potential for artefactual material and associated marsh lands also hold potential to retain archaeology.
- Recommends a number of measures including that all excavated material from all watercourses to be spread and metal detected as part of the finds retrieval strategy and that all works within watercourse (streams and rivers) or wetland area to be subject to close archaeological monitoring.

### **Inland Fisheries Ireland**

- Notes that at larger rivers and streams, cable crossings will be facilitated using directional drilling. The main concern from this activity relates to the disposal of waste arising from the drilling/boring operations and request that a condition be imposed ensuring that the developer liaise with the IFI to confirm method statements for the safe disposal of soil.
- Consider that for smaller streams, it would be desirable that these are crossed using open trench methodology. For the purpose of access road, bridge structures using only sufficient structures for the crossing including larger diameter pipes (1.2m) would be preferable.
- Culverts should be fish passable and large enough to accommodate stronger flows and not overflow onto the access road. Potential barriers to fish movement can be counteracted by changing to a bottomless culvert, reducing the gradient or adding substrate to create roughness. The retention of substrate may be facilitated by ensuring there are sufficient baffles in the pipe to hold substrate and provide bed roughness. It is recommended that a condition is imposed requiring the developer to contact the IFI to confirm the appropriateness of the specific bridge crossings and that there should be flexibility in the planning conditions to allow for a change in the type of culvert/bridge crossings to facilitate fish movement.

- IFI recommend that unless there is a bedrock substrate, that a strong cobble bed should be laid for the width of the watercourse and for approximately 1.5m downstream. This will allow for energy to dissipate and prevent excessive scour and suspended solids moving downstream into more important sections of the catchment.
- IFI request that a condition of planning should be that method statements for the different crossings are agreed with the IFI and confirmed in advance of the works progressing. In particular, there will be a requirement that methodologies comply with the IFI biosecurity measures for instream works.
- Silt controls during the construction and operation of the access roads will have to be monitored and settlement lagoons are likely to be required along the route. It will be essential that normal greenfield drainage is accommodated as much as possible along the route and between culverts.
- Request that in the event of an environmental emergency for significant pollution, the IFI should be added to the list of agencies to be contacted.

#### **Transport Infrastructure Ireland (13.07.2018)**

- The development currently proposed does not abut or cross the national road network. TII has no objection to the findings presented in terms of potential impact on the safety and efficiency of the national road network. Subject to operations being undertaken in accordance with the analysis and mitigation set out in the EIAR, TII has no specific comments to make on the proposed development.
- In TII's opinion, any recommendations arising from the traffic analysis contained in the EIAR should be included as conditions in any decision to grant permission in the interests of maintaining levels of safety capacity and efficiency on the national road network.

#### **5.2.3 Other**

##### **Peter Sweetman and Associates, Environment and Planning Consultants on behalf of Edel and Paul Grace (21.08.2018)**

- Refers to O' Grianna and others v. An Bord Pleanála IEHC 632 (2014) where it was judged that the connection to the national grid was an integral part of the overall windfarm development. The cumulative effect of both phases must be

assessed by the accompanying EIS. The judgement infers that a project cannot be split, but must be assessed as a whole project. The subject development has been split into three parts. Old paperwork for the consented windfarm is being resubmitted in the context of a cumulative assessment. At no stage will the entire project be assessed as one entire project.

- Considers that it is incorrect that within the AA scoping assessment submitted, the windfarm itself is screened out as it has already been assessed.
- State that the decision to allow the subject development to be considered Strategic Infrastructure is incorrect.
- Refers to Further Information request and response in respect of the windfarm development (Planning Authority Reference 13510003/ABP Ref. 243040) where the applicant proposed a plan that provides suitable mitigatory habitat for foraging hen harrier to offset any loss of potential foraging habitat. States that a portion of this land put forward as alternative habitat is to be replanted as replacement forestry as opposed to the required mixture of wet grassland and improved grassland. States that it is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm, guaranteeing beyond all reasonable doubt that the project will not adversely affect the integrity of the area, that such a measure may be taken into consideration when appropriate assessment is carried out.
- Refers to Grace and Sweetman c. An Bord Pleanála case (C164/17) regarding compensatory habitats and that the same issue is applicable to the grant of permission for the windfarm development which includes compensatory land for the hen harrier. Consider that the application to be examined in total would be ultra vires of both EU directive and Irish Planning law.
- States that the development will destroy the habitat of other protected species including the Marsh Fritallary Butterfly, Golden Plover and Meadow Pipit. No mitigation is proposed and habitat loss is disregarded.
- States that the measures outlined in the submission to deal with the protection of the aquatic environment rely heavily on the use of silt fencing. Consider that there is no certainty that these measures can and will work and cannot be scientifically relied upon. The competent authority must, certainly for those

elements of is decision which are capable of giving rise to reasonable scientific doubt, state detailed and expressed reasons that are such to dispel that doubt.

- With regard to cumulative impact, notes that there is a total of 88 Turbines built and operating in close proximity to both the proposed development and the SPA. States that the application provides no evidence to show where the cumulative impacts of these turbines has been described or taken into consideration.
- Consider that the cumulative effect of adding more turbines to the grid is significant and negative and takes no account of the cost of wind energy in Ireland or the lack of significant reductions on our emissions.
- States that the assessment of material assets has provided no assessment of the impact of the project on fixed wireless broadband and in this context, the EIA is incomplete.
- States that the development is a material contravention of the County Development Plan and in particular policy TWIND 4.6. In relation to the Slievefelim to Silvermines Mountains SPA, the plan advocates taking a precautionary approach and recommends avoidance of these areas for wind energy development. The majority of the grid route is located in an area deemed not suitable for wind development. As per the O' Grianna judgement, the grid connection is part of the wind turbine project and is development. To grant permission would contravene the plan.
- Notes that consent of one land owner has been withdrawn and in this context, an access road to the permitted windfarm cannot be carried out.
- Considers that the noise assessment submitted in respect of the EIS for the windfarm development is out of date as it was originally prepared in 2013. Submission refers to a number of publications regarding the negative impacts of noise from wind turbines to human health. States that it would be incorrect to accept an out of date EIS as the basis of any assessment.
- States that the EIS fails to address the issue of the degradation of turbine foundations over time and the potential cumulative impact of same and also does not adequately address reinstatement of roads.

**Ned and Carmel Buckley, Gurtmara, Upperchurch, Co. Tipperary (16.01.2018)**

- States that his consent regarding his lands to facilitate the development of the windfarm have been withdrawn and in this context, the development would breach condition no. 1 of Application Reference 13510003/ABP Reference 243040.
- Objects to the construction of a wind turbine adjacent to his dwelling.
- Concerns raised regarding the spread of disease and TB.
- Considers measures to protect Hen Harrier population are inadequate.

**James and Tanya Embleton, Seskin House, Upperchurch, Thurles, Co. Tipperary (16.08.2018)**

- Considers that the application contravenes the Aarhus Convention given the extent and complexity of the documentation and the limited time frame to comment on same.
- Considers that cumulative impact has not been adequately assessed due to project splitting and that the development contravenes the decision in respect of O' Grianna v. An Bord Pleanála.
- State that wind farms create little employment potential after the construction phase. The development will reduce property values, reduce visitors to the area and impact negatively on tourism. Consider that the turbines will have an adverse visual impact.
- State that the wind farm will have adverse noise impacts and that issues such as sleep disturbance need further investigation. Consider that noise assessment should be carried out using the linear scale. Concerns regarding noise impacts to Upperchurch School.
- There is no evidence scientific or otherwise to suggest that wind turbines reduce carbon emissions or produce a realistic amount of power. Submit that on most days all renewables are running at less than 10% of the fuel mix and at times have to draw power from the grid to run. Does not consider the development will have a positive impact on Climate.
- Query whether turbines are in compliance with the European Machines Directive and whether there are suitable measures to deal with wildfires caused by turbines.



- Concerns raised that the project has been deemed a SID project and that this results in project splitting.
  - Objects to the route choice which is in part located through the SPA and considers that construction works in this sensitive area will have environmental consequences. State that it would be considerably safer to follow public roads where any excavation is planned and regulated and the risk of accident would be reduced, as would disturbance and contamination of the SPA.
  - In relation to the decommissioning of the project, object to the proposal to leave concrete from the cables and turbine bases in the ground. Concern that this will cause alkaline leaching, adversely impacting on the SPA, water and drainage. Also consider that roads should be removed and land reinstated. State that there is no information how wind turbine blades will be disposed of once decommissioned.
  - Consider that environmental protection measures accepted with the UWF application need to be revisited as substitution habitat proposed for the hen harrier population is unacceptable as there is no scientific proof that it is effective (refer to Grace and Sweetman ECJ 25/7/2018). As the application is split, the whole application must be treated as a new application.
  - Concerns regarding human health impacts including potential contamination to water supply to dwellings in the vicinity. Consider that water in private wells needs to be monitored over a long period.
  - State that construction hours should be restricted from 8am to 6pm Monday to Friday and 9am to 1 pm on Saturdays.
  - Consider that the development will have an adverse impact on the local road network and may result in internet disruption or reduction.
  - State that it unlikely the survey submitted with the application fully assesses the extent of the Marsh Fritillary Butterfly. Concern regarding the fact that the development will result in the loss of up to 20% of the habitat for this species. Anecdotal evidence that the wind farms cause the migration of flora and fauna.
- Emer Ó Siochrú and Toal Ó Muiré, Coumnageeha, Upperchurch, Thurles, Co. Tipperary (23.08.2018)**
- The application represents project splitting and should be considered as one comprehensive proposal.

- Consider that it is unreasonable for ordinary citizens to assess the highly technical documents submitted with the application. State that non-technical summary is inadequate and does not fully address the impacts on biodiversity.
- State that applicant proposes compensatory measures for the endangered Hen Harrier as a mitigation measure which is contrary to recent EU case.
- Object to the routing of the cables and states that these should be laid along the public roads. Requiring Ecopower to compensate the Council for the remedial works necessitated by the cable would have mitigated the cost of any damage caused. The disruption on secondary routes and back roads during works would be temporary and could be minimised by good project planning and scheduling whereas, the impact on vulnerable protected habitats of the adopted route could be permanent. Consider that cost and commercial reasons underlie the selection of the route through rural protected sites and that this route may have been chosen to facilitate access to the cable for further wind or solar farms. State that any scoping opinion on this matter should be made available to the public.

**Gerard and Mary Ryan (Cooney), Knockcurraghbola Commons, Upperchurch, Thurles, Co. Tipperary (20.08.2018)**

- Object to location of turbines and potential noise, shadow and flicker impacts.
- Object to the location of the substation and its proximity to their dwelling.  
Concern regarding potential noise impacts.
- Concern regarding impacts of TB spread to dairy herd from displaced badgers and deer. Consider that flora and fauna surveys submitted are out of date.  
Object to proposed compensatory habitat for Hen Harrier population.
- Concern regarding spread of invasive species. Consider that rivers and wells will be adversely affected due to the extent of water crossings required.
- Note that consent from one of the landowners has now been withdrawn.

**Teresa Moser and Others, 2 Seanhalla, Rearcross, Newport, Co. Tipperary (09.07.2018)**

- Concern regarding the location of the cable and its impact on the access to their farm. Families will be affected by the cable line when going to work and taking children to school.
- The lands proposed for the cable route are habitat for the Hen Harrier.

## 6.0 APPLICANTS RESPONSE TO THE OBSERVATIONS SUBMITTED

6.1 A detailed response to the observations is provided by the applicant. The principal points can be summarised as follows:

### **Project Splitting**

- Notes that a number of court decisions since O' Grianna and Others v An Bord Pleanála have confirmed that the law does not require that planning permission for all integral parts of large projects must be obtained at the same time, or as part of a single application to one consenting authority. Refers to relevant case law - North Kerry Wind Turbine Awareness Group v An Bord Pleanála (2017) IEHC 126 and Alen Buckley v An Bord Pleanála (2017) IEHC 541.
- The UWF Grid Connection is one of 5 elements of the whole UWF project. In the UWF Grid Connection EIA Report, both the effects of the UWF Grid Connection and cumulative effects of all five elements of the whole project are evaluated. Sufficient information has been provided to enable the Board to assess any likely significant effects of the project as a whole.

### **AA Screening**

- State that the already consented Upperchurch Windfarm was subject to AA by An Bord Pleanála in 2014. The NIS submitted with the UWF Grid Connection application comprises a detailed evaluation of the potential impacts on European sites of the UWF Grid Connection and other elements of the UWF project individually and in combination with other plans and projects.
- Note that the NIS has been carried out in accordance with the methodology outlined in European Guidance, the identification of potential or likely significant effects on a European site is the 'test' at Stage 1 screening, and the evaluation of the effect of the development on the integrity of European Sites is the 'test' at Stage 2 of the Appropriate Assessment process. Environmental protection measures are not taken into account at Stage 1 screening, but are included at Stage 2 so that mitigation of adverse impacts can be evaluated. This is in accordance with EC Guidelines and with recent case law. Compensatory measures are not proposed.

## Compensatory Measures

- During the submission period on the planning application for Upperchurch Windfarm (2013), the DAU (NPWS) made a submission to Tipperary Co. Co. stating that, because the windfarm is located close to the boundary of the Slievefelim to Silvermines Mountains SPA for Hen Harrier, it should be treated as being within the SPA for the purposes of evaluating the ex-situ effects on Hen Harriers which breed within the SPA but forage outside of the SPA.
- The Upperchurch Hen Harrier Scheme, which is a management plan to enhance and protect foraging areas for the Hen Harrier outside of the SPA, was proposed by the developer in response to the submission by the DAU. The implementation of this scheme is conditioned in planning condition no. 18 of the consent to the windfarm.
- Consider that the submission regarding the efficacy of this mitigation measure pertaining to the parent permission for the windfarm is an impermissible collateral attack on that planning permission. For the avoidance of doubt, the Upperchurch Hen Harrier Scheme is a mitigation measure and not a compensatory measure. A compensatory measure is one aimed at compensating for the adverse effects of a project on a protected site. However, no element of the Upperchurch Windfarm project will adversely affect the integrity of a European site.
- In the UWF Grid Connection NIS, the effects on the Slievefelim to Silvermines Mountains SPA are evaluated for a reduction in or loss of, suitable or potentially suitable Hen Harrier foraging habitat. The evaluation is that there will be no permanent exclusion of Hen Harrier from foraging habitat within the SPA due to the UWF Grid Connection and, therefore, no adverse effects. The positive effects of the Upperchurch Hen Harrier Scheme are not taken into account in this table.
- Refer to previous Inspector's Report and the statement that *"irrespective of whether these alternative foraging areas offered by way of mitigation, are or are not provided, I am satisfied that no adverse effects arise from the development in relation to the Natura Site and any qualifying interest or objectives."*

## **Cumulative Impacts of Other Windfarms**

- An area of 15km around the footprint of the subject development UWF Grid Connection and around the other elements of the Whole Upperchurch Windfarm project was used to scope other large projects and relevant activities with potential to cause cumulative effects.
- In total, 32 projects and 3 activities were scoped for potential to cause cumulative effects. Bunkimalta windfarm is generally scoped in as there is the potential for this large project to be constructed at the same time as the UWF Grid Connection project. Windfarms at Knockmealse, Ballinlough, Curraghraigue and Ballinveny were excluded as due to their size and distance, they were considered unlikely to cause cumulative effects. Notes that all of the turbines in the Hollyford area to the south are included due to the large number of turbines in this area and its proximity to the Upperchurch area.

## **Use of the 2013 EIS and 2014 EIA to Inform the Cumulative Assessment**

- The use of previous assessments is established in the EIA Directive where it states that, with a view to avoiding duplication of assessments, the results of other assessments should, where relevant and available, be taken into account.
- Consider that the 2013 EIS and 2014 EIA are valid sources of information on the Upperchurch Windfarm for the UWF Grid Connection EIA Report. There have been no material changes in the receiving environment of any of the EIA topics.
- The competent experts who prepared the 2018 EIA Reports reviewed the Upperchurch Windfarm 2013 and 2014 assessments as part of their studies of the baseline environment and studied the area again in 2017, as part of field and desktop studies. These field trips and desktop studies enabled the experts to ascertain the existing environment and the trends in the existing environment. The periods covered by trends are generally a decade long or more, as change in the local environment is expected to happen slowly, over a long period of time. The trends identified in the existing environment encompass the 2012-2014 assessment period for the Upperchurch Windfarm, and together with site visits and surveys in 2017, this enabled the competent experts to consider the impact of time.

## **Material Contravention of the Development Plan**

- State that the submission by Tipperary County Council consider the development to be enabling works to an already permitted development. The proposed development is not a windfarm. It is grid enabling works for an already permitted windfarm which is to be developed in a policy area open for consideration for new wind energy development.

## **Route Selection**

- Alternative routes for the underground cable are examined in the EIAR (Ch. 4). The route of the 110kV Underground Cabling along farm and forestry roads across lands through the SPA was carefully selected and environmental protection measures were designed into the project to avoid or minimise effects. Both the EIA Report and NIS show that the route selected for the UWF Grid Connection will not cause significant adverse effects to the environmental factors and will not adversely affect any European Sites.

## **Cost of Wind**

- Notes that the observer's submission regarding the "*Cost of Wind Energy in Ireland*" was reviewed by the Commission for Regulation of Utilities who noted that the report is supported by a number of inaccuracies and misunderstandings of the regulatory framework. Also note that the report does not set out an alternative view of how Ireland might meet its renewable commitments by 2020. States that wind generated electricity production is not the only factor that influences the energy process in Ireland.
- Wind power is now producing 24% of Ireland's electricity demand. The variability in the wind power is catered for in the electricity system where demand levels for electricity also vary all the time.

## **Ownership Consent**

- State that one of the observers was in dispute with the Upperchurch Windfarm project whereby consent was withdrawn to apply for the development. The dispute was subject to a Judicial Review challenge and the judge ruled that the applicant had given a valid and informed consent to the developer to make the application. The relevant land is not located within the boundary of the UWF

Grid Connection site, nor is it within close proximity to the boundary, being 3km to the nearest point of the UWF Grid Connection.

### **Non Technical Summary/Extent of Documentation**

- The information to be provided in an EIA report is set out in Article 5 and Annex IIA and Annex IV of the EIA Directive. The information requirements are extensive and it was the EIA co-ordinators aim to set out the environmental information in a rational and systematic format. The result is an EIA Report that is concise and well integrated across the topic factors.
- The Non-Technical Summary provides a concise but comprehensive description of the project, the effects on the environment and an overview of the approach to the assessment. The authors are satisfied that should a member of the public wish to understand and become involved in the planning of the project, that the Non-Technical Summary provides an accessible and accurate reflection of the information contained in the EIAR. The NTS provides enough information to understand the implications of the subject application.

### **Loss of Habitat in Relation to Marsh Fritillary, Golden Plover and Meadow Pitpit**

- Note that these species are not listed as Special Conservation Interests of the Slievefelim to Silvermines Mountains SPA. The effects on these species are evaluated in the Biodiversity Chapter of the EIAR and it is concluded that the effects of habitat loss or disturbance/displacement will not be significant.
- Marsh Fritillary surveys were extensive. It was evaluated that cumulative habitat loss effects as a result of all elements of the whole project will be of slight adverse significance due to the overall extent and degree of habitat loss (5.1% of available habitat); the County importance of the Marsh Fritillary Butterfly and the long term nature of the loss which is offset by the absence of Marsh Fritillary larvae webs in the habitats to be lost.

### **Efficacy of Silt Control Measures**

- State that there are no populations of Freshwater Pearl Mussel in the Mulkear regional catchment of the River Shannon, and, therefore, there is no potential for effects to Freshwater Pearl Mussel as a result of the UWF Grid Connection or any other element of the Whole Upperchurch Windfarm Project. Potential

impacts on the Freshwater Pearl Mussel are fully assessed in the Biodiversity Chapter of the EIAR.

- Note that measures to protect the aquatic environment include silt fencing, but a range of other measures are also proposed. There is no reliance on a single type of drainage measure at any proposed works area. There are 23 Project Design Environmental Measures and 13 no. Best Practice Measures proposed for the protection of surface water quality. These measures have been developed in consultation with Inland Fisheries Ireland and use best practice water course crossing techniques which are tried and tested regularly across the country.
- The proposed use of siltbusters is as a final stage treatment measure at larger watercourse crossings where directional drilling is to be carried out and possibly at the Mountphilips substation. The water that will require treatment at these locations will contain mineral subsoil or fluvial deposits which will settle out in settlement ponds.

### **Climate**

- It is established EU and National Policy to develop renewable resources with the generation of electricity from wind as one of the main technologies to be deployed.
- Every Kilowatt of electricity generated by wind power avoids CO<sub>2</sub> emissions from electricity generated by non-renewable sources such as coal, peat, oil, gas and non-renewable waste. The latest SEAU report "*Energy-related CO<sub>2</sub> Emissions in Ireland 2005-2016*" lists avoided CO<sub>2</sub> emissions due to wind power generation which in 2016, were over 2 million tonnes of CO<sub>2</sub>.

### **Material Assets**

- Note that condition no. 13 for the Upperchurch Windfarm requires that in the event that the turbines cause interference to telecommunications signals, that effective measures shall be introduced to minimise interference with telecommunication signals in the area.

### **Noise and Vibration**

- During the operational phase the Mountphilips substation will emit noise, though levels will not be audible above existing background levels at the



nearest residence and there is no potential for cumulative effects with the operational windfarm. Construction noise will be short term and temporary. Noise impact is comprehensively addressed in the EIAR.

- Upperchurch National School is located 4km from the nearest point of the UWF Grid Connection and there will be no construction traffic through Upperchurch Village.
- There will be no significant sources of vibration during the construction phase due to the absence of piling and blasting on site. Road opening, rock breaking and earthmoving activities will be at a very low level with expected levels of between 0 and 1mm/s at 10m distance. There are no sources of vibration during the operational phase.

### **Road Safety**

- This issue is addressed in Chapter 15 of the EIAR and it is concluded that the application of advanced signage and traffic management measures on the approach to any works or site access points; the provision of sightlines at permanent site entrances; the use of flagmen at temporary entrances and the application of speed restrictions on vehicles delivering construction materials along the local road network will ensure the continued safe passage of all road users.

### **Concrete Leaching**

- All concrete used for the construction of the turbine bases will conform to Irish Standard EN 206:2013. In relation to decommissioning of these bases, this will be carried out under Condition 22 of the Upperchurch Windfarm permission, where the removal or covering of soil of turbine bases and road will be agreed with the Planning Authority prior to decommissioning of the windfarm.
- The effects on soils due to the contamination by cement based compounds is evaluated in Section 10.2.4.5 where it is determined the effects will be imperceptible. The effects on water quality are assessed in Chapter 11 and are also deemed to be imperceptible.

### **Safety of Cabling**

- The underground cables associated with the UWF Grid Connection will be set in concrete in the cable trench and will be identified by three layers of warning

tape. The location above ground is identified with marker posts. Host landowners will be supplied with cable mapping post construction.

### **Local Wells**

- Due to the shallow depth and temporary nature of the excavations associated with the construction works, the potential for impacts to local wells/springs is limited to physical contact with the well head/source or localised changes to surface water run/off/groundwater flow or localised contamination of the source by fuel/oil spills/cement based compounds. Long term protection is not required because there won't be any excavations within 50m of a well or spring during the operation of the grid connection.

### **Bovine TB**

- Displacement of badger or deer is evaluated in Chapter 8 of the EIAR. Displacement effects are not likely to be significant. The spread of TB was not included as a potential impact in the EIAR, as information from local consultation with landowners was that Bovine TB outbreaks have not been a significant issue in recent years either along the UWF Grid Connection route or at the windfarm location.

### **Invasive Species**

- An Invasive Species Management Plan has been prepared. The implementation of the Plan will be overseen by the Environmental Clerk of Works along with an invasive species specialist. There are no Japanese Knotwood infestations within the construction works boundaries. The purpose of the plan however, is to ensure that infestation close to the boundaries are contained.

## 7.0 POLICY CONTEXT

### National Planning Framework

7.1 The National Planning Framework (NPF), 2018, is the overarching national planning policy document for Ireland. It is a high level strategic plan that sets out a vision for Ireland to 2040, expressed through ten National Strategic Outcomes (NSO). One of the key goals of the NPF (National Strategic Outcome 8) is that of Transition to a Low Carbon and Climate Resilient Society. It acknowledged that Ireland's energy policy is focussed on the pillars of sustainability, security of supply and competitiveness. It is stated:

*"In the energy sector, transition to a low carbon economy from renewable sources of energy is an integral part of Ireland's climate change strategy and renewable energies are a means of reducing our reliance on fossil fuels."*

7.2 It is an objective that:

*"40% of our electricity needs will be delivered from renewable sources by 2020 with a strategic aim to increase renewable deployment in line with EU targets and national policy objectives out to 2030 and beyond."*

7.3 National Policy Objective 55 states:

*"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."*

### Energy Policy Framework 2007 – 2020 – Delivering a Sustainable Energy Future for Ireland (Energy White Paper)

7.4 This white paper sets out a strategic energy policy framework to deliver a sustainable energy future for Ireland. One of the key elements of the policy framework is to ensure the delivery of security of supply, which is considered to be essential for all sectors of the economy, for consumers in general and for society as a whole. The key items needed to deliver a secure supply of electricity on a consistent basis are identified as robust networks and electricity generating capacity. To this end, it is an overall objective to strongly support electricity investment programmes in the high voltage transmissions network and the

distribution network, in order to facilitate regional development. The White Paper also sets the target of 33% of electricity being produced from renewable generation by 2020. It estimates that wind energy will provide up to 90% of the renewable energy required to meet these targets.

### **National Renewable Energy Plan 2010**

- 7.5 The National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under Directive 2009/28/EC. It states that the Government has set a target of 40% electricity consumption from renewable sources by 2020. The plan notes that the majority of the renewable electricity target will be delivered by onshore wind. Ireland's Fourth Progress Report was submitted in February 2018. Ireland has met the interim target set by the Renewable Energy Directive for 2015-2016, reporting an average final energy consumption of 9.5% over that two year period, against a target level of 8.92%.

### **Strategy for Renewable Energy 2012-2020**

- 7.6 The Strategy states that the Government's overriding energy policy objective is to ensure competitive, secure and sustainable energy for the economy and for society. It states:

*“Renewable energy, allied with energy efficiency, is crucial to our goals of secure sustainable and competitive energy supplies reducing dependency on expensive fossil imports and underpinning the move towards a low carbon economy.”*

- 7.7 Strategic Goal 1 states:

*“Progressively more renewable electricity from onshore and offshore wind power for the domestic and export markets”.*

### **Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure, July 2012**

- 7.8 In this policy statement the Government acknowledges the essential need to meet the demand for energy in a safe, secure and continuous manner as it is the lifeblood of the economy and society. It reaffirms the imperative need for development and renewal of the energy networks, in order to meet both economic and social policy goals. The Government endorses, supports and promotes the

strategic programmes of the energy infrastructure providers, particularly EirGrid's Grid 25 investment programme across the regions. The benefits are identified as securing electricity supply to homes, businesses, factories and farms, underpinning sustainable economic growth in the regions and enabling Ireland to meet its renewable energy targets.

### **White Paper - Ireland's Transition to a Low Carbon Energy Future, 2015-2030**

7.9 This energy policy covers the time frame up to 2030. Chapter 5 of the document, *"Delivering Sustainable Energy: Efficiency, Renewables, Technology"*, sets out government priorities in the area of renewable energy up to 2030. This includes incorporating higher penetration of renewable energy sources. It is recognised in the document that conventional sources of energy will remain a significant component of supply over the period to 2030. Beyond 2030, the paper sets out a vision of a radical transformation of Ireland's energy system which is required to meet our climate policy objectives. It is stated that this transformation will result in a low carbon energy system by 2050 with GHG emissions from the energy system reduced by between 80% and 95%, compared to 1990 levels.

7.10 The significant contribution of onshore wind in this transition is recognised. It is detailed that to achieve the 2020 40% target, the average rate of build of onshore wind generation will need to increase to up to 260MW per year.

### **Draft Renewable Energy Policy and Development Framework 2016**

7.11 The Framework notes that under the 2009 Renewable Energy Directive, EU Directive 2009/28/EC: On the promotion of the use of energy from renewable resources, Ireland is committed to produce at least 16% of all energy consumed by 2020 from renewable sources. This will be met by 40% from renewable electricity.

7.12 The main principles of the Renewable Electricity Policy and Development Framework include:

- Maximise the sustainable use of renewable electricity resources in order to develop progressively more renewable electricity for the domestic and potential, future export markets.
- Assist the achievement of targets for renewable energy, enhance security of energy supply and foster economic growth and employment opportunities.

### **Grid25 A Strategy for the Development of Ireland's Electricity Grid for a Sustainable and Competitive Future' (2008)**

- 7.13 EirGrid's Grid 25 strategy provide a strategic overview for the development of the electricity transmission system to 2025 and beyond. It is based on a vision of delivering a strong, cost efficient transmission system, which will be essential for facilitating regional economic growth and to facilitate the achievement of Ireland's renewable energy goals. A review of Grid 25 completed in 2015 confirmed inter alia the urgent need for investment in the electricity transmission system. The overall scale of Grid 25 was reduced on foot of reduced projected demand and the availability of new technologies.

### **Regional Planning Guidelines for the Mid West 2010-2022**

- 7.14 The guidelines notes that the region has a substantial renewable energy resource potential. It states that in general favourable consideration should be given to renewable energy projects provided that consideration has been given to the environmental and social impact of such development.

### **North Tipperary County Development Plan 2010-2016**

- 7.15 The current statutory plan for the area is the North Tipperary County Development Plan 2010-2016. The Plan has had its lifetime extended (11A Planning and Development Act 2000, (as amended)), and will remain in effect until a new Regional Spatial and Economic Strategy is made by the Southern Regional Assembly. Thereafter, a new Tipperary County Development Plan will be made. The plan incorporates the Tipperary Renewable Energy Strategy 2016. It is stated that the Core Aim is to ensure that the County continues to be a leader in addressing climate change through the facilitation of appropriately located renewable energy developments. The Vision of the document is:

*"The Council will seek to support and facilitate the development of the renewable energy sector in line with the strategic goals set out by the Department of Communications, Climate Action and Environment whilst balancing the need for new development with the protection of the environmental, cultural and heritage assets of the county."*

7.16 Appendix 1 of the document includes the Tipperary Wind Strategy 2016. Relevant policies and objectives include:

**TWIND 1: General Policy Statement on Wind Energy Development**

*“It is the policy of the Council to support, in principle and in appropriate locations, the development of wind energy resources in County Tipperary. The Council recognises that there is a need to promote the development of ‘green electricity’ resources and to reduce fossil fuel dependency and greenhouse gas emissions in order to address the global issue of climate change, and to comply with European and International policies with regards to renewable and sustainable energy resources.”*

7.17 The Strategy notes in section 5.11 that significant parts of the Slievefelim-Silvermines and the Hollyford Hills are subject to Natura 2000 designations and are designated as Secondary Amenity Areas in the County Development Plan. It is stated:

*“The combined area at this location has seen the greatest intensity of wind energy development in recent years and there remains approximately 80 permitted turbines yet to be constructed in this area. It is recommended, in view of the significant numbers of turbines yet to be constructed, and in view of the environmental designations of the area, that over the lifetime of this Strategy that a precautionary approach to wind energy development in these areas be undertaken and that they be designated as unsuitable for new wind energy development. This will not preclude the repowering of existing developments or the construction of permitted developments, however, it will prevent new wind energy development in the meantime.”*

7.18 Other relevant policies of the County Development Plan include:

**Policy LH1: Landscape Management and Protection**

*“It is the policy of the Council to facilitate new development which integrates and respects the character, sensitivity and value of the landscape in accordance with the designations of the County Landscape Character Assessments.”*

**Policy LH2: Protection of Visual Amenity and Character of Primary and Secondary Amenity Areas**

*“It is the policy of the Council to ensure the protection of the visual amenity, landscape quality and character of designated Primary and Secondary Amenity Areas. Development which would be an adverse impact on the visual amenities of the area will not be permitted. New development shall have regard to the following:*

- a) Developments should avoid visually prominent locations and be designed to use existing topography to minimise adverse visual impact on the character of primary and secondary amenity areas.*
- b) Buildings and structures shall ensure that the development integrates with the landscape through careful use of scale, form, finishes and colour.*
- c) Existing landscape features, including trees, hedgerows and distinctive boundary treatment shall be protected and integrated into the design proposal.*
- d) Development shall comply with the development standards set out in Chapter 10.”*

**Policy LH6: Natura 2000 Sites and Protected Species**

*“It is policy of the Council to ensure the protection, integrity and conservation of existing and candidate Natura 2000 site and Annex 1 and II species listed in EU Directives. Where it is determined that a development may independently, or cumulatively, impact on the conservation values of Natura 2000 sites, the Council will require planning applications to be accompanied by a Natura Impact Statement in accordance with ‘Appropriate Assessment of Plans and Projects, Guidelines for Planning Authorities (DEHLG2009)’ or any amendment thereof.”*



## 8.0 PLANNING ASSESSMENT

### 8.1 Introduction

8.1.1 As noted in the introduction, the development the subject of this application under the Strategic Infrastructure provisions of the Planning and Development Act, is for the purpose of connecting the permitted UWF Substation at Upperchurch Windfarm to the proposed substation at Mountphilips. The Mountphilips Substation will be connected to the existing adjacent Killonan-Nenagh 110kV Overhead line and thus export electricity from the windfarm when constructed and operational to the National Grid. The Board determined on the 20<sup>th</sup> of September 2018 that an Oral Hearing in respect of the application should not be held.

8.1.2 I have examined the file and the submissions/observations received, considered national, regional and local policy guidance and I have inspected the site. I consider the main planning issues relevant to the assessment of this strategic infrastructure development application are as follows:

- Procedural and Legal
- Compliance with Strategic and Local Land Use Policy
- Impact on Residential Amenities
- Route Options

### 8.2 Procedural and Legal

#### Principle of Parent Windfarm Development

8.2.1 It is noted that multiple objections to the previously permitted windfarm development (13/510003/An Bord Pleanála Reference 243040) have been submitted by a number of the observers. Concerns and objections are raised on matters including:

- Noise impact.
- Shadow and flicker impact.
- Impacts to human health from turbines.
- Degradation of turbine foundations and decommissioning of turbine structures.

- Fire risk.
- Reduction in property values.
- Potential impact on tourism.
- Adverse visual impact of turbines.
- Lack of employment generation.

8.2.2 I consider that all potential environmental impacts associated with the parent windfarm development have been fully assessed in the previous Inspector's Report and Board decision pertaining to this development. The subject application is for the underground grid connection and substation and is considered enabling works to the permitted windfarm. It is a standalone application and the merits of the proposed development must be considered in its own right, albeit in combination with the effects of the permitted windfarm for the purposes of carrying out EIA. . The applicant has provided a detailed assessment of potential cumulative impacts with the permitted wind farm development where appropriate. Merits or otherwise of a decision made by An Bord Pleanála on a previous planning permission are not for review. However, in combination effects where appropriate will be considered in this assessment.

Determination that Proposed Development Constitutes Strategic Infrastructure Development

8.2.3 It is asserted by one of the observers that allowing part of this overall project to be assessed as SID is incorrect. As set out in Section 1 of this report, pre application consultations were initiated on behalf of the applicant to assess whether or not the proposed substation and underground electrical cable constituted infrastructure under the provisions of the Act (Reference VC0098). On foot of an assessment by the Board, who are the competent authority for making this Strategic Infrastructure determination, a direction was issued in January 2018 stating that the proposal constitutes strategic infrastructure. I do not, therefore, intend to review this matter further in this assessment of the merits of this consequent planning application.

Consent of Landowner to Implement Permission Under Planning Authority 1351003/ABP Reference 243040

8.2.4 Reference is made by two parties that in relation to the permission for the windfarm development permitted under 13/510003/An Bord Pleanála Reference 243040, consent of one of the landowners has been withdrawn and it is not possible to implement the permission as permitted. It is highlighted by the applicant that this issue has already been subject of an unsuccessful Judicial Review. It is considered that this is a matter outside the scope of this assessment as it relates to a separate permitted development and has no bearing on the application currently before the Board. The current application for the substation and underground cable must be considered on its own merits. All necessary letters of consent relevant to the subject application have been submitted by the applicant and I am satisfied that the applicant has the necessary legal interest to make the application.

#### Aarhus Convention

8.2.5 I note concerns raised by some of the observers regarding the extent of documentation submitted and its technical nature and the comments that the application is contrary to the Aarhus Convention. Objections are also raised regarding the Non Technical Summary.

8.2.6 I am satisfied however, that the participation of the public has been appropriately afforded and effective and the application has been made accessible to the public by electronic and hard copy means with adequate timelines afforded for submissions. All of the application reports, drawings and figures are available for examination on a public website.

8.2.7 A non-technical summary was also submitted with easy to understand language and content. It has been written in non-technical language without technical jargon, avoiding technical terms, detailed data and scientific discussion. As detailed by the applicant in their response to the submissions on the application, the NTS provides a concise but comprehensive description of the development, the environment, the effects on the environment and an overview of the approach to the assessment. I am satisfied in this context, that the rights of third parties were not prejudiced and the EIAR and NTS are compliant with the relevant guidance and regulatory requirements.

### **8.3 Compliance with Strategic and Local Land Use Policy**

- 8.3.1 The current application before the Board is made under the provisions of Section 182A of the Planning and Development Act 2000 (as amended) and relates to the provision of an electricity substation and underground grid connection to serve a previously permitted windfarm development comprising 22 no. turbines.
- 8.3.2 The importance of renewable energy is clearly acknowledged at a national, regional and local level and there are a suite of policy documents that support and promote the transition to a low carbon and climate resilient society. Ireland is committed to produce at least 16% of all energy consumed by 2020 from renewable sources. This will be met by 40% from renewable electricity, a major source of which, is wind power. Under the National Planning Framework, National Policy Objective 55 seeks to *“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.”* In the White Paper - Ireland’s Transition to a Low Carbon Energy Future, 2015-2030, the significant role and contribution of onshore wind in this transition is recognised and it is detailed that to achieve the 2020 40% target, the average rate of build of onshore wind generation will need to increase to up to 260MW per year.
- 8.3.3 It is estimated that the amount of electricity that will be exported from the permitted Upperchurch Windfarm will be approximately 2% of the total wind electricity made in Ireland. It, therefore, has the potential to play a significant role in meeting the government’s renewable energy targets. The proposed substation and underground cable development is a critical piece of enabling infrastructure to facilitate the operation of the windfarm. Its development supports the wider aims and objectives of the NPF and other relevant policy documents outlined in section 7 above with regard to promoting and developing renewable energy. In this context, I consider the principle of the development to be entirely appropriate and consistent with strategic policy objectives at a national, regional and local level.
- 8.3.4 I note that a number of the observers raise concerns and objections regarding wind energy and assert that it is an ineffective means to reduce our carbon emissions. Specific reference is made to a report entitled *“The Cost of Wind Energy in Ireland”* by Wind Aware Ireland (WAI). A further peer review study is also submitted which it is stated demonstrates that wind energy increases our use and dependence on fossil fuels.

- 8.3.5 The response by the applicants to the observations submitted notes that the WAI report was reviewed by the Commission for Regulation of Utilities in response to a request from the Public Accounts Committee. The Commission's Report notes that the WAI Report is supported by a number of inaccuracies and misunderstandings of the regulatory framework. It also notes that the report does not set out any alternative views as to how Ireland will meet its renewable commitments by 2020. It concludes that the Public Accounts Committee should not use the reports as a basis to evaluate energy policy. The Peer Review Study submitted does not include any analysis of the renewable sector in Ireland. I am satisfied, therefore, on this basis, the observers have not submitted sufficiently robust documentation that overrides or discounts the importance of wind energy as an integral part of Ireland's renewable energy strategy.
- 8.3.6 The North Tipperary County Development Plan which includes the Tipperary Wind Strategy 2016 also clearly supports the development of the renewable energy sector. I note that it is contended by one of the observers that the subject substation and grid connection represents a material contravention of the development plan. It is stated that the development contravenes the plan as it is located in an area deemed not suitable for wind development.
- 8.3.7 It is detailed in the Tipperary Wind Energy Strategy (which forms an appendix to the County Plan) that there has been a high intensity of wind energy development around the Slievefelim-Silvermines and the Hollyford Hills uplands. It is stated that in view of the significant numbers of turbines yet to be constructed, and in view of the environmental designations of the area, that over the lifetime of the Strategy that a precautionary approach to wind energy development in these areas be undertaken and that they be designated as unsuitable for **new** wind energy development (my emphasis). I do not consider that this policy is applicable to already permitted windfarm developments. The proposed development is an essential piece of enabling infrastructure to facilitate the operation of an already permitted windfarm. I do not consider it to constitute a new wind energy development as per the direction of the Energy Strategy. I also note that in their submission Tipperary Co. Co. fully endorse and support the proposal and consider it as enabling works to an already permitted development. In this regard, I am satisfied that the development does not constitute a material contravention of the

County Development Plan. The Board in any case in their consideration of Strategic Infrastructure cases is not confined in its decision making in the same way as it is for normal planning applications and appeals where material contravention of a Development Plan is cited.

8.3.8 In conclusion, I consider the grid connection and substation as essential enabling infrastructure to support the permitted wind farm development and I consider that the associated overall development complies with and supports the wider strategic objectives set out in national, regional and local policies, all of which seek to promote and develop renewable energy and facilitate the transition to a low carbon economy.

#### 8.4 **Impact on Residential Amenities**

8.4.1 In considering potential impacts of the development on residential amenities, the most relevant considerations relate to landscape and visual impact and noise impact. I note that concerns have been raised by some of the observers regarding the impact of the substation.

8.4.2 A detailed assessment of the potential noise impacts of the proposed development is set out in Chapter 12 of the EIAR (refer to Table 12.2.4.2 and 12.2.4.3). In terms of construction impacts, there is potential for noise emissions from working plant or machinery, particularly during excavation works. It is stated in the EIAR that construction works will take place at up to 7 different locations along the route. There are no residential properties or community facilities within 350 metres of the Mountphilips Substation. There are 127 no. local residences and 6 no. community facilities within 350 metres of the remaining UWF Grid Connection construction works area, of which only 22 will be within 60 metres. A range of mitigation measures are set out to minimise noise during the construction phase and whilst it is likely that there may be some impacts during the construction phase, these impacts will be temporary and short term in nature. In this context, I am satisfied that no material adverse impacts to residential amenity will arise.

8.4.3 In terms of the operational phase, it is identified in the EIAR that there are 6 residential properties within 400 metres of the Mountphilips substation site, the nearest of which is 385 metres. Noise surveys were undertaken from a representative similar substation in Kerry and it is stated in the EIAR that a noise

level of 60 dB(A) was measured at 5m, which would result in a worst case of 22dB at 385m. This is well below the low background noise threshold of 35dBA for low background noise levels. In this regard, the noise levels from the proposed substation will be negligible and will have no impact on local residences.

8.4.4 In terms of the substation and its potential visual impact, it is noted that it will be located within the rolling lowland farmland context around Newport. The landscape is not considered rare or distinctive. It is detailed in the EIAR that the new substation will have a minor but permanent impact on the rural landscape fabric of its site and immediate surrounds. However, noting the distances to the nearest residential receptors and the fact that it is not readily visible from surrounding roads and residences, I am satisfied that potential visual impacts will be minimal. Visual impacts could potentially be further minimised through planting and appropriate boundary treatment to the substation.

## 8.5 Route Options

8.5.1 The potential route options considered for the proposed underground cable are set out in Chapter 4 of the EIAR. Concerns have been raised by a number of the observers regarding the chosen route and the fact that part of the selected route runs through the Slievefelim to Silvermines Mountains SPA. It is submitted that the routing will have potential negative environmental consequences and that it would be preferable to locate the cable in the public road network.

8.5.2 Section 4.2.3.1 of the EIAR notes that three alternative route locations were considered.

**Route A:** This is a public road route located along the Regional Road (R503 Thurles to Limerick Road).

**Route B:** Comprises a mainly public road route and some cross country route. The road route uses the local road network (north of the R503) through Toor, as far as Belaclave, avoiding the R503 regional road. The route then follows a cross country route through farm and forestry tracks, with some crossing of forestry and agricultural lands and public roads.

**Route C:** Is a cross country route mainly along the farm and forestry track and across agricultural lands. Part of the route is located within the Slievefelim to

Silvermines Mountains SPA. This is the selected route for the proposed underground cable.

- 8.5.3 The EIAR notes that ESB Networks who are responsible for technical approval for the 110kV UGC have a preference for cables to be laid in the public road where they have guaranteed access whenever required. However, it is detailed that following consultations with Tipperary Co. Co. Roads Department, significant concerns were raised by the council regarding the potential impacts of laying the cables in the road on the fabric and traffic of the local public road network during construction (refer to section 4.2.3.2 of the EIAR for further detail). On foot of this consultation, a decision was made to progress Route C – the cross country route.
- 8.5.4 The applicant has set out in Table 4.3 of the EIAR a comparison of the environmental effects of the alternative 110kV UGC routes. A number of environmental factors are considered including biodiversity, land, soils, water, material assets built services, material assets roads, population and human health and cultural heritage. A scoring system is used to evaluate each option.
- 8.5.5 In terms of biodiversity, it is noted that Option A along the regional route has minimal effects as the cable will run along the existing road corridor. For Option B, it is identified that whilst there will be some crossing through the SPA, minimal effects are likely to arise to the designated site due to the use of public/private roads and the minimal use of forestry lands and the low value of roads to biodiversity. For Option C, it is identified that an impact on biodiversity will occur and that there is potential for significant effects to European sites. In terms of water, it is acknowledged for Option C (cross country) that new watercourse crossings will be required, whereas with options A and B, existing watercourses are used.
- 8.5.6 The principal negative impacts of Options A and B over the selected cross country route relate to Material Assets Built Services, Material Assets Roads and business disruption. It is highlighted that there is potential to impact on built services e.g. electricity, water, telecoms etc. In terms of the public road, for Option A, it is identified that a significant length of the cable would be constructed under the road resulting in a potentially significant effect to the road structure. Disruption during construction is also likely, although it is noted that the carriageway is of sufficient width to leave the road open during the works using a stop go system with flagmen.



For Option B, there is also potential for effects to the road structure and it is anticipated that road closures would be required during the construction phase but that this would be mitigated by the low volume of traffic using these roads. It is also identified that for Option B, there are potential negative impacts to archaeology due to the proximity of the route to a standing stone.

8.5.7 I have examined the matrix regarding the environmental effects of the alternative routes, and I am concerned that undue weight has been given to potential impacts on the local road network in coming to the conclusion that Option C – the cross country route is the optimal route for the cable. It is clear that route Option C has the potential to have significant environmental impacts. It is noted that whilst it is evident from an operational and maintenance perspective, that co-locating the cable with existing infrastructure i.e. the public road is the best solution, due to the concerns raised by Tipperary Co. Co. regarding potential disruption and impacts to the road fabric, options A and B were discounted.

8.5.8 It is evident that the discussions with the council regarding the potential route options took place in advance of the EIAR process. I have significant concerns that the potential impacts of the selected route on biodiversity were not given adequate consideration and weight, and that the consultation process with the Roads Department predetermined the selected route rather than a thorough analysis of which option would have the least environmental impacts. Although perhaps understandable on the part of a Local Authority Roads Department focussed on a single issue, greater weight was given to a material asset matters (impact on roads). This impact could reasonably in my view be appropriately managed and mitigated through good construction practice to negate potential negative effects. I also consider that the concerns raised regarding impacts to the local roads are somewhat overemphasised having regard to the nature and level of use of the roads concerned.

8.5.9 The chosen cross country route selected by the applicants will involve significant intervention in the natural environment some of which runs through an SPA which is designated due to its importance to the Hen Harrier species. Within the SPA concealed roads will be utilised, however, there are likely to be significant impacts albeit short term, during the construction phase. The Board should be aware, that I have concerns regarding the potential loss of foraging territory within and outside of

the SPA due to the construction of permanent access roads etc. to serve the proposed development. This has the potential to negatively impact on the Hen Harrier species. This is addressed in further detail in section 10 of this report. The development will also result in the crossing of a significant number of watercourses - 90 in total and new in stream works to 38 watercourses will be required (see table 11.12 of EIAR).

8.5.10 I note that the applicant sets out comprehensive environmental protection measures throughout the EIAR to mitigate potential impacts of the proposed cross country route. Whilst the measures proposed are likely to minimise the potential environmental impacts, I am not satisfied that the proposed routing is the most appropriate from a planning or environmental perspective when it appears that the principal reasons the alternative routes A and B (which are likely to have far less environmental consequences) were discounted is primarily due to the effects on the fabric and traffic of such roads.

8.5.11 In considering the appropriateness of the cross country route in lieu of Option A and B, the Board should be aware that Tipperary County Council have previously permitted a similar development for 22.25km underground 38kV cable between Bunkimalta wind farm and Nenagh – Planning Authority Reference 16/600433 (see pouch for further details of this decision). The route of the cable was located primarily in public roads over a distance of c. 17.8km. The Planner's report notes that the development involved the laying of an underground cable under public roads, off road and crossings of the Newport River, the Nenagh River and other streams (10 in total). There is, therefore, a clear precedent where a similar form of development has been permitted within the public road network in the County.

8.5.12 In considering alternatives, it is my view that regard must also be had to other options including overhead line alternatives. The EIAR at section 4.1.1 states the following:

*"Renewable generator grid connection applications are processed in a 'Gate' system whereby all applications that have met the defined criteria, are processed in tranches by the System Operator of the electricity network. The latest tranche is known as Gate 3. Ecopower has secured a Gate 3 grid connection agreement*

*(DG96) from ESB Networks (the System Operator) for the consented Upperchurch Windfarm (UWF)".*

- 8.5.13 It is further stated that "*The Grid Connection Agreement describes the approved connection method to the national electricity grid for UWF. It comprises two elements 1. A new 3 – bay 110kV substation connecting to the national electricity grid at a point along the existing Limerick to Nenagh overhead line (called the Killonan - Nenagh 110kV line), in the Freagh area, near Newport, County Tipperary. 2. An underground cable c.30km in length linking this new substation back to the Consented Windfarm Substation at Upperchurch Windfarm".*
- 8.5.14 The consideration of alternatives is an information requirement of Annex IV of the EIA Directive, and the single most effective means of avoiding significant environmental effects. Having regard to this requirement and its purpose (i.e. avoidance of significant environmental effect), I am not satisfied that the consideration of alternatives is adequate as no information has been provided in relation to the consideration of alternative grid connection technologies such as overhead line alternatives. Furthermore, no information has been provided in relation to alternative connection locations where the windfarm could potentially connect to the national electricity grid. This in my view is a significant deficiency in the EIAR.
- 8.5.15 In conclusion, I am not satisfied that the applicant's consideration of potential route options is robust and undue weight has been given to matters pertaining to impacts on the local road network over environmental matters, particularly biodiversity. Whilst the concerns of Tipperary County Council are noted, having regard to the recent decision regarding the Bunkimalta windfarm grid connection referenced above, I am not satisfied that it has been reasonably established that potential adverse impacts to the road fabric and potential disruption including road closures could be not be mitigated through appropriate construction and traffic management. The selected route option will result in a significant intervention on the natural environment and may have indirect impacts on the integrity of the Slievefelim to Silvermines Mountains SPA due to the loss of foraging habitat suitable for the Hen Harrier species (see section 10 for further assessment of this issue). Furthermore, I am not satisfied that the applicant has provided adequate consideration of alternative grid connection technologies such as an overhead line option or

alternative connection locations where the windfarm could connect to the national grid with potentially less environmental consequences.

## 9.0 ENVIRONMENTAL IMPACT ASSESSMENT

### 9.1 Introduction

9.1.1 This section sets out an environmental impact assessment (EIA) of the proposed project. The subject application comprises an 110kV electrical substation and 110kV underground electrical cabling. As highlighted the Inspector's Report on the Strategic Infrastructure Pre Application Consultation – ABP Ref. 22.VC0098, an EIS is not mandatory for the proposed development under Section 182 of the Act. The proposed development would not come within a class of development set out in Schedule 5 of the Planning and Development Regulations 2001, as amended.

9.1.2 It is acknowledged by the applicant that the proposed UWF Grid Connection including the substation and underground cable is not an Annex I or Annex II type project. It is stated however, that the proposed UWF Grid Connection is part of a whole project which includes a project described in Annex II Paragraph 3: Energy Industry (i) installations for the harnessing of wind power for energy production (wind farms) in the Planning and Development Regulations 2001 as it a windfarm with more than 5 turbines having a total output greater than 5 megawatts. It is detailed by the applicant that the UWF Grid Connection is part of the Whole UWF Project, one element of which, Upperchurch Windfarm, did require that the competent authority carry out an Environmental Impact Assessment. It is considered, therefore, that in order for a cumulative assessment of the Whole UWF Project to be carried out by the competent authority, that an EIAR be prepared. An Environmental Impact Assessment Report (EIAR) has accompanied this application. Having regard to Article 102 of the Planning and Development Regulations, I propose to complete the EIA section of this report.

9.1.3 This application was received by the Board on the 28<sup>th</sup> of June 2018 and, therefore, having regard to the provisions of Circular Letter PL1/2017, the subject application falls within the scope of the amending 2014 EIA Directive (Directive 2014/52/EU) on the basis that the application was lodged after the last date for transposition in May 2017. It does not however, fall within the scope of the European Union (Planning and Development) (Environmental Impact Assessment) Regulations

2018, as the application was lodged prior to these regulations coming into effect on the 1<sup>st</sup> of September 2018.

9.1.4 I am satisfied that the information contained in the EIAR complies with Article 94 of the Planning and Development Regulations 2000, as amended, and the provisions of Article 5 of the EIA Directive 2014.

9.1.5 I have carried out an examination of the information presented by the applicant including the EIAR, and the submissions made during the course of the application. A summary of submissions made by the planning authority, prescribed bodies and observers has been set out in section 5 of this report.

## 9.2 **Consideration of Compliance with Legislative Requirements**

9.2.1 I firstly examine if the EIAR complies with the requirements of the amended EIA Directive, in particular Article 3 (1), 5 (1) and Annex IV, which sets out the information that is required to be provided by the developer.

9.2.2 The EIAR consists of four volumes, grouped as follows: Volume C1: EIAR Non Technical Summary, Volume C2: Main Report, Volume C3: EIAR Figures and Volume C4: EIAR Figures. In total, the EIAR includes 20 chapters. Chapters 1 to 5 provide an introduction to the project, EIA Report process and scoping, alternatives considered and a description of the proposed development. Chapters 6 and 7 address population and human health. Chapter 8 addresses biodiversity and chapters 9 and 10, land and soils. Chapters 11, 12 and 13 address water, air and climate and Chapters 14 and 15 relate to material assets. Chapter 16 and 17 address cultural heritage and landscape. Chapter 18 is interactions and Chapter 19 monitoring. Chapter 20 provides an executive summary. The content and scope of the EIAR is considered to be acceptable and in compliance with Planning Regulations. No likely significant adverse impacts were identified in the EIAR.

9.2.3 As required under Article 3(1) of the EIA Directive, the EIAR identifies, describes and assesses in an appropriate manner, the direct and indirect significant effects of the project on the following factors: (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 it considers the interactions between the various factors.

- 9.2.4 The requirements of Article 3(2) include the expected effect deriving from the vulnerability of the project to risks of major accidents and/or disaster that are relevant to the project concerned. The EIAR addresses this issue in section 5.5. It is considered that having regard to the nature and scale of the development itself, it is unlikely that any major accident will arise. The EIAR notes that the UWF Grid Connection is not vulnerable to major accidents due to the minimal volumes of the dangerous substances which will be used during the construction and operation of the project and the distance to sensitive residential receptors. There are no Seveso sites in proximity to the grid connection site. Natural disasters that could potentially affect the grid connection include land slippage and flooding. A peat stability assessment has been carried out as part of the EIAR and concludes that the UWF Grid Connection has a low and acceptable risk of potential peat failure, has an acceptable margin of safety and is suitable for the development of the 110kV UGC. The likelihood of land slippage occurring is very unlikely. In terms of flood risk, the Flood Risk Assessment undertaken as part of the EIAR concludes that there is a low risk of impact on the UWF Grid Connection as all of the above ground permanent infrastructure are located in Flood Zone C. Also there will be no potential of increased local flooding as a result of the UWF Grid Connection as most of the development is located underground. There are unlikely to be any effects deriving from major accidents and or disasters and I am satisfied that this issue has been addressed satisfactorily in the EIAR.
- 9.2.5 In accordance with Article 5 and Annex IV, the EIAR provides a description of the project comprising information on the site, design, size and other relevant features of the project. It also provides a description of the likely significant effect of the project on the environment and a description of the features of the project and/or measures envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment.
- 9.2.6 Alternatives are presented in Chapter 4 of the EIAR and includes an assessment of alternative locations and layout for the development, alternative design for the 110kV substation and compound and alternative processes and mitigation measures. A further assessment of the alternatives, particularly in the context of the route options is discussed in Section 8.5 of this report including the appropriateness of the selected route option. It is detailed in this section, that it is

my opinion, that there is a deficit in the EIAR as the applicant has not provided adequate consideration of alternative grid connection technologies such as an overhead line option or alternative connection locations where the windfarm could connect to the national grid. In this regard, I am not satisfied that the applicant has complied with the requirements of the legislation, in providing an adequate or robust description of the reasonable alternatives studied, which are relevant to the proposed project and its specific characteristics. The Board should also be aware that the applicant has not submitted a detailed schedule of mitigation measures.

- 9.2.7 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 relevant to the specific characteristics of the particular project and project type and to the environmental features likely to be affected. In this regard, the EIAR provides a description of the evidence used to identify and assess the significant effect on the environment. The EIAR provides an adequate description of forecasting methods and evidence used to identify and assess the significant effects on the environment. No specific difficulties are stated to have been encountered in compiling the required information.
- 9.2.8 I am satisfied that information provided in the EIAR is of a sufficiently high level of quality and is evidently prepared by qualified and competent experts. In this regard, I note the qualifications and expertise demonstrated by the experts involved in the preparation of the EIAR (set out in Table 2:1) of the EIAR. The competencies of the experts detailed in the EIAR are considered to be consistent with and appropriate to the requirements of the EIA and amending directive. Details of the consultation entered onto by the applicant as part of the preparation of the application and EIAR are set out in Chapter 3 and are considered adequate. I am satisfied that the participation of the public has been effective and the application has been made accessible to the public by electronic and hard copy means with adequate timelines afforded for submissions.
- 9.2.9 Regarding the comprehensiveness of the submitted EIAR and the extent to which it takes into account the impacts on the environment likely to arise on foot of the cumulative impact of the UWF Grid Connection in combination with all other elements of the Whole UWF Project and the cumulative effects of the development with other projects and activities in the area, I note that this issue is



comprehensively addressed in the EIAR. Section 2.3.2.2.1 of the EIAR sets out the methodology for the cumulative assessment and states that all other elements of the Whole UWF Project are scoped in for cumulative evaluation in the environmental factor topics. The cumulative effects with other project and activities are based on those projects within a 15km catchment of the Whole UWF Project. The structure of the EIS document is such that, in my opinion, it provides a comprehensive assessment of the potential cumulative impacts under each of the required environmental factors as specified in the directive. In particular, in my opinion the EIAR allows for an integrated assessment of the overall impact of the UWF Project as a whole as well as detailing the cumulative impacts of this project with other relevant plans and projects within a reasonable catchment.

9.2.10 In conclusion, I am satisfied that the information provided is reasonable and sufficient to allow the Board to reach a reasoned conclusion on the significant effect of the project on the environment, taking into account current knowledge and methods of assessment. Overall, with the exception of the analysis of alternatives considered, I am satisfied that the information contained in the EIAR complies with the provisions of Article 3, 5 and Annex (IV) of EU Directive 2014/52/EU amending Directive 2011/92/EU. The content and scope of the EIAR is considered acceptable and in compliance with the requirement of Articles 94 (content of EIS) and 111 (adequacy of EIS content) of the Planning and Development Regulations, 2001 (as amended) and the provisions of the new amending Directive.

### 9.3 **Likely Direct and Indirect Significant Effects**

9.3.1 I have carried out an examination of the EIAR and other relevant information presented by the applicant. In carrying out the EIA, this section should be read in conjunction with the preceding sections of my assessment, particularly Section 8.5 and the following section (section 10) on Appropriate Assessment.

9.3.2 In my assessment below, I consider the direct and indirect significant effects of the development against the factors set out under Article 3 (1) of the EIA Directive 2014/52/EU 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 landscape.
- (e) The interaction between the factors referred to in points (a) to (d).

#### **9.4 Population and Human Health**

- 9.4.1 Population and human health are dealt with predominantly under Chapter 6 and 7 of the submitted EIAR.
- 9.4.2 Positive impacts on population and human health are considered in the context of the local economy and those that potentially arise from employment associated with the development (direct and indirect) that will be maintained or created as a consequence of the development. The assessment provided by the applicant indicates that the proposal will generally result in a positive but imperceptible impact to the local population as a result of spending and job demand in the local economy. There will be an increase in gross value added to business and employment opportunities in the study area due to the purchase of goods, materials and services, employment and payments to landowners, which will also result in secondary induced spending in the local economy. There will be neutral impacts in terms of reduction in tourism revenue and business disruption during the construction and operational phase.
- 9.4.3 Negative impacts to the population and human health could potentially arise as a consequence of issues such as contamination of water supply, air quality and noise impacts, operational transmission of electricity and increased risk of injury from road traffic accidents. Contamination of water supply is addressed in Chapter 11 of the EIAR. Appropriate design measures will be put in place during the construction phase to minimise any negative effects to water quality and supply and in this regard health impacts caused by contaminated water are unlikely.
- 9.4.4 Air Quality impacts arising from vehicle emissions and dust is addressed in Chapter 12 of the EIAR. The majority of residential properties are located over 50 metres away from construction works or construction haul routes. It is determined that any impact to air quality during the construction phase will be temporary, intermittent and not of a concentration or exposure to quantify any adverse health outcome to local residents.

- 9.4.5 In terms of operational transmission of electricity, addressed in Chapter 12 of the EIAR, there will be some increase in magnetic field levels at residential properties and community facilities within 100 metres of the 110kV UGC. The worst case increase in levels of magnetic fields at local residences and community facilities ranges from 0.01 $\mu$ T to 1.79 $\mu$ T. As these levels remain significantly below the more conservative International Commission on Non Ionizing Radiation Protection (ICNIRP) magnetic field reference of 100 $\mu$ T, it is considered no adverse impacts on human health would occur.
- 9.4.6 Noise is addressed in Chapter 12 of the EIAR. This notes that construction noise will be temporary and intermittent and will be reduced through appropriate project design measures such as hours of operation and sequencing of works. With regard to potential noise impacts from the substation itself, as previously noted in section 8.4 of this report, the nearest residence to the substation is 385 metres to the east. As the worst case noise level at 385m will be well below the 50dB(A) World Health Organisation guideline of 50-55db (A) for daytime levels, it is considered that there will be no annoyance or consequential health impacts as a result of noise from the substation.
- 9.4.7 Chapter 15 on Material Assets-Roads considers increased risk of injury from road traffic accidents and notes that the local and regional roads in the study area are lightly trafficked. Construction traffic will not add substantial volumes of traffic and furthermore, road safety has been included in the project design through the use of appropriate advance warning signage, flagmen and traffic management measures. Changes to traffic flows as a result of the construction phase will be temporary, appropriately managed and, therefore, increased risk of injury from road traffic accidents will not be material. Similarly operational traffic from the development will add negligible volumes of traffic to the local road network, thus negating any increased risks from road traffic accidents.
- 9.4.8 The EIAR identifies the most sensitive receptors in the vicinity of the development as being the local residents and community, Kilcommon National School and transient people such as walkers and road users. The potential impacts on human health of these sensitive receptors is specifically assessed in the report and it is concluded that subject to mitigation measures including construction management and road safety measures, no significant adverse impacts will occur to these

receptors. It is stated in the EIAR that the development will have no significant adverse impacts on population or human health and that there will be no residual impacts.

## **Conclusion**

9.4.9 I have considered all of the written submissions made in relation to population and human health, in addition to those specifically identified in this section of the report. I am satisfied that the impacts identified would be avoided, managed or mitigated by measures forming part of the proposed scheme, proposed mitigation measures and measures within suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of population and human health. I am also satisfied that the cumulative effects are not likely to arise and that approval should not be withheld on the grounds of such cumulative effect.

## **9.5 Biodiversity**

9.5.1 Chapter 8 of the EIAR addresses Biodiversity. The Board is advised that the application is accompanied by a Natura Impact Statement. My assessment of the effect of the proposed development on the conservation objectives and qualifying interests of Natura 2000 sites is dealt with under Section 10 of my assessment below, under the heading of Appropriate Assessment. For the purpose of my assessment, I have considered aquatic and terrestrial ecology separately.

9.5.2 The development will cross the Slievefelim to Silvermines Mountains SPA. The receiving environment is representative of typical upland habitats and includes land under active management for agriculture and forestry. There are a number of regional and local rivers and streams, the majority of which feed into the River Shannon and include the Newport (Mulkear River), the Bilboa River and the Clare River. The Lower River Shannon SAC occurs at the crossing points of Newport (Mulkear) River and Bilboa River and part of the route is also located in this SAC along an existing farm track. The route of the underground cable also affects the Clodiagh River catchment which feeds into the River Suir and the Lower River Suir SAC. The development in part overlaps with the boundary of the Bleanbeg Bog NHA. Both of the cSACs are designated for the protection of salmonids and

freshwater aquatic species. The SPA is designated for the protection of the Hen Harrier.

- 9.5.3 In terms of terrestrial habitats, the lands in the area comprises a mix of agricultural grassland, commercial forestry plantations, peatlands, hedgerows, wet grassland, private and public roads. Birds, bats and other mammals, amphibians, reptiles and invertebrates are present within the receiving environment.
- 9.5.4 A number of detailed fieldwork surveys were undertaken to inform the Biodiversity chapter of the EIAR including aquatic and terrestrial surveys, bird surveys and bat, otter and badger surveys. The details of these surveys is provided throughout the EIAR Biodiversity chapter and summarised in the Non Technical Summary.
- 9.5.5 A suite of project design environmental protection measures are detailed which are aimed to prevent and reduce potential negative effects on Biodiversity. These are set out in detail in Tables 8.24, 8.31, 8.40, 8.47, 8.54, 8.61, 8.73, 8.80, 8.87 and 8.94. Further best practice and mitigation measures are set out in the Environmental Management Plan, Surface Water Management Plan and Invasive Species Management Plan.
- 9.5.6 The direct and indirect effects of the development on European sites is addressed in Section 10 of this report. The EIAR states that the development will not result in any effects that will adversely affect the integrity of the European sites under consideration. The Board should note however, that I have concerns regarding the potential impacts of the development on the conservation objectives and qualifying interests of the Slievefelim to Silvermines Mountains SPA. In terms of the Bleanbeg Bog NHA, the EIAR notes that due to the fact that the underground cables are located on an existing excavated forestry road on the periphery and downslope side of the Bleanbeg Bog NHA, coupled with the mitigation measures proposed, no impacts are likely to occur.

### **Biodiversity – Aquatic Ecology**

- 9.5.7 The potential impacts on aquatic habitats and species are set out in the EIAR. The majority of watercourse crossings for all project elements are minor streams and land drains which have been subject to previous anthropogenic modification. Of the 90 watercourse crossings along the grid connection, 34 no. have been evaluated to have fisheries value. Of these, 15 no. will be subject to instream works. It is stated

that there is likely to be a slight to moderate impact on the quality of the physical makeup of watercourse channels and water quality within watercourses. This is due to the environmental protection measures to be incorporated into the project, the limited extent of works required and the fact that the majority of watercourse crossings are drains.

- 9.5.8 Watercourse morphology relates to the shape of a watercourse channel, its bed and banks and how erosion, transportation of water, sedimentation and the composition of riparian vegetation changes over time. Impacts to the change in flow of watercourses will be slight as the majority of watercourses have already been altered by forestry and farming practices. Whilst instream works potentially affecting flow will be required at a limited number of locations during the construction phase, such works will be temporary and reversible in nature. At 6 new permanent crossing points, changes to the flow regime will be long term and permanent. However, the alterations to flow morphology will be subject to Project Design Measures including the reinstatement of watercourses at crossing locations.
- 9.5.9 Slight impacts in terms of disturbance and displacement of fish are predicated. However, due the times that works will be undertaken (during the IFI specified period) and working practices adopted, such impacts will be brief and reversible. There will be slight to moderate impacts to the riparian habitat along the banks of watercourses during the construction phase. However, such impacts will be short term and appropriate vegetation will be reinstated. Impacts from the spread of aquatic invasive species will be slight to moderate.

## **Biodiversity – Terrestrial Ecology**

### Habitat

- 9.5.10 Twenty habitat areas comprising 407.5ha were recorded along the survey corridor. The dominant habitats present are improved agricultural grassland and conifer plantation which together make up 74.8% of all habitats present. Habitats of international conservation importance are located at two locations where the grid connection passes through the boundary of the Lower River Shannon SAC. A range of habitats of national importance are also found through the study area and are detailed in section 8.5.1.3 of the EIAR. It is stated in the EIAR that due to their presence within an SPA designated for Hen Harrier, a number of habitats serve an

important role in supporting the structure and function of the SPA. This primarily includes suitable breeding and roosting habitat.

9.5.11 The impacts of reduction on terrestrial habitats will not be significant because of the low sensitivity of land to be used and the limited extent of land affected by the development. It is estimated that permanent habitat loss will comprise 0.51ha and will be limited to 4 no. habitat types. Impacts arising from loss of trees and hedgerow severance will also not be significant. There are a limited number of trees affected by the proposal. Tree loss is limited to 26 no. mature trees and 4 immature trees. Hedgerow removal will be limited and reinstated/replanted where required. Permanent habitat loss is limited to 45 metres of permanent hedgerow removal, whilst 700 m of new hedgerow will be planted.

#### Hen Harrier

9.5.12 It is stated in the EIAR *“In general, and as expected given the overlap with a European site designated for Hen Harrier, habitats within 2km study area are considered of high quality for the species”*. Hen Harrier surveys were undertaken to identify all Hen Harrier breeding and winter roosting sites in suitable habitat within 2km of the proposed works. These breeding surveys confirmed 3 no. Hen Harrier breeding attempts within 2km of the UWF Grid Connection in 2016. A further nesting attempt was confirmed at 2.15km from the grid connection. Of these 4 breeding attempts, 3 successfully fledged young. The distance from the UWF Grid Connection in respect of each nest location was 154m, 500m, 903m and 2.15km respectively. In 2017, one nesting attempt was confirmed within 500 metres of the grid connection with a second nest 680 metres distant. Both of these nesting attempts successfully fledged young. In 2017, there were 2 additional but unconfirmed breeding attempts. Winter roost surveys undertaken between 2016 and 2018 identified 3 winter roosts, all within the SPA. 1 site was within 500 metres of the grid connection and the others within 1km and 2km respectively.

9.5.13 Hen Harrier is listed on Annex 1 of the EU Bird Directive 2009/147/EC. The Slievefelim to Silvermines Mountains SPA is designated as one of 6 SPA sites in the country with breeding populations of Hen Harrier as the sole special conservation interest to ensure the conservation of the species. Both breeding and wintering Hen Harrier are evaluated as Internationally Important and assigned a

sensitivity rating of Very High. Hen Harriers are known to be sensitive to disturbance and foraging habitat loss within 2km of nesting attempts can have a negative effect on breeding success.

- 9.5.14 The EIAR sets out a number of Project Design Measures (Table 8.54) to reduce and mitigate against potential impacts to the Hen Harrier. These include confirmatory Hen Harrier breeding surveys and restrictions on construction activities within 500 metres of an active Hen Harrier breeding attempt or active nesting activity, during the breeding season. During the Hen Harrier roosting season, construction works within 1000m of a roost will be limited to the period between one hour after sunrise to one hour before sunset. All new permanent access roads within the SPA will be concealed access roads. Annual visual inspections of the lands within the SPA over the underground cable and the testing/inspection/planned maintenance at joint bays will be scheduled outside of the Hen Harrier breeding season.
- 9.5.15 The principal potential impact to Hen Harrier is identified in the EIAR as the reduction in or loss of suitable foraging habitat. Land take or land use/cover change of foraging habitats such as grassland, scrub, bog and forestry may cause secondary effects for this Annex 1 species and SPA qualifying interest. Loss of foraging habitat at key periods of the breeding cycle can have knock on effects on breeding success of identified pairs nesting nearby, in particular where it occurs within 2km of a nest location.
- 9.5.16 It is detailed in the EIAR that the total permanent land take of foraging habitat totals 5.12 ha. The calculation of permanent land take is based on all new permanent access roads, permanent berms and forestry felling. A portion of this land take within the SPA (1.98ha<sup>1</sup>) will be covered with concealed access roads, planted with either native grass species or heather as appropriate to match the surrounding habitat so as to avoid effects on the SPA itself. Permanent berms within the SPA will be immediately reinstated. The net permanent loss will, therefore, be 3.14ha

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<sup>1</sup> The Board should be aware there is a discrepancy in the EIAR regarding the extent of permanent land take within the SPA. It is stated in section 8.6.4.1 that 2.44 ha is within the SPA. However, it is detailed later in this section that the area within the SPA is 1.98ha. It should be noted that in the NIS, the stated figure is 1.98 ha as being within the SPA and in this context for the purpose of assessment I have used this figure rather than 2.44ha.



from the study area, all of which is located outside the SPA but within 2km of the grid connection.

- 9.5.17 The significance of this impact is considered to be moderate (negative) in the EIAR. It is stated in the EIAR that the magnitude of effect on the sensitive Hen Harrier is evaluated as low (1 to 5% of habitat lost) and equivalent to a minor shift away from baseline conditions however, with the underlying character and composition remaining similar to pre-development circumstances.
- 9.5.18 When considering the potential cumulative impacts of the reduction in or loss of suitable foraging habitat, it is set out that there are both positive and negative effects across the Whole UWF project. It notes that the Upperchurch Hen Harrier Scheme (which is a condition of the parent windfarm decision) results in the creation of a new and alternative habitat suitable for foraging Hen Harrier and that this is mitigation for habitat lost through potential displacement caused by the construction of the wind turbines. There is, therefore, a net gain through design to the Hen Harrier both in area and quality of habitat. It states that remaining negative effects primarily stem from the UWF Grid Connection, however, the provision and management of UWF Replacement Forestry specifically for Hen Harrier, outside but adjacent to the SPA contributes to a net gain overall to the Hen Harrier of over 30.26ha of actively managed foraging habitat.
- 9.5.19 Notwithstanding the assessment in the EIAR, I have concerns regarding the permanent loss of over 3ha of foraging habitat on the Hen Harrier population. Whilst this permanent loss of habitat will occur outside of the SPA, it is identified in the EIAR that this land is highly suitable foraging habitat for this species. The bird surveys have identified that nesting locations were identified within and immediately adjacent to the grid connection construction area boundary and that foraging habitat loss especially within 2km of nesting attempts may have negative effects on breeding success.
- 9.5.20 Whilst the Hen Harrier Management Scheme proposed under the parent windfarm permission is noted, this is intended as a suitable mitigatory habitat to compensate for the loss of habitat associated with the windfarm. In contrast to the current application, surveys submitted with the parent windfarm application identified no evidence of hen harriers at the windfarm site. There is no information provided in

the current application as to whether Hen Harrier Management Scheme is suitably located or appropriate to mitigate the permanent loss of the foraging habitat arising from the grid connection, particularly in the context where nest locations have been identified in proximity to the proposed route - see section 10 for further assessment of this issue.

- 9.5.21 I am not satisfied on the basis of the information submitted in the EIAR that significant negative effects cannot be ruled out beyond a reasonable scientific doubt on the Hen Harrier Species due to the loss of over 3 ha of potential foraging habitat in close proximity to identified nesting locations. I do not consider that such potential ex situ impacts have been adequately assessed or evaluated. I have also have concerns regarding the use of the proposed concealed roads within the SPA as a measure to mitigate against the permanent loss of habitat within the SPA. I am not satisfied that the effectiveness of this mitigation measure has been proven. I also consider that there is a lack of assessment of the temporary loss of habitat in the SPA during the construction phase. This is assessed further in Section 10 below.
- 9.5.22 Other potential impacts during the construction phase such as a reduction in or loss of suitable nesting habitat and winter roosts, disturbance/displacement, mortality and reduction in prey items are deemed neutral or excluded. No adverse impacts during the operational or decommissioning phase are identified. See Table 8.56 of the EIAR. I am satisfied that no adverse impacts in this regard arise.
- 9.5.23 I note that the potential cumulative impacts to the Hen Harrier species are set out in section 8.6 of the EIAR including a detailed assessment of the cumulative impacts of the development in conjunction with all other elements of the Whole UWF Project, the Bunkimalta and Castlewaller windfarms, forestry, agriculture and turf cutting. Notwithstanding my concerns regarding the assessment of the potential impacts of the project alone, having regard to the information in the EIAR, including the Hen Harrier Management Schemes associated with the Upperchurch, Castlewaller and Bunkimalta windfarms, I am satisfied that no cumulative impacts are likely to arise.
- 9.5.24 I note the comments made by some of the observers regarding cumulative impacts in the context of the Opinion of the Advocate General regarding Edel Grace and

Peter Sweetman v An Bord Pleanála (ECLI:EU:C:2018:593). In the case of the parent Upperchurch Windfarm, the location of the turbines is not within the SPA and no adverse effects on the integrity of the SPA was deemed to arise in that case. I am satisfied as noted by the applicant, the Upperchurch Hen Harrier Scheme is a mitigation measure and not a compensatory measure as no habitats within the SPA are lost as a result of the development.

#### Other Bird Species

- 9.5.25 The receiving environment in the UWF study area supports a wide variety of general bird species. 2 no. breeding season bird surveys were undertaken and a list of 58 species identified.
- 9.5.26 Slight impacts to the Golden Plover population due to habitat loss and disturbance will occur due to the small amount of suitable roosting and foraging habitat lost (1.4%). Disturbance to this species however, is likely to be not significant due to the nature and brief duration of the construction works. There will also be slight impacts to the Meadow Pipit arising from habitat loss. The total land use change comprises 1.38% of available habitat within the study area boundary. Overall however, it is considered that there will be a slight positive impact to the general bird population due to habitat improvement that will benefit bird diversity arising in particular from new hedgerow and tree planting. Felled commercial forestry at Castlewaller (1 ha) will contain a concealed geocell roadway, which, along with the remainder of the corridor at this location, will be planted with heather. Hedgerow crossing locations will be enhanced with equivalent numbers of native trees as part of project design. At Mountphilips, 700m of new hedgerow will be planted. I note the concerns raised by some of the observers regarding potential impacts of the development on bird species, particularly the Golden Plover and Meadow Pipit. Golden Plover and Meadow Pit are an Annex 1 Red Listed species. They are however, not listed as special conservation interests of the Slievefelim to Silvermines Mountains SPA and having regard to the minor extent of potential habitat lost, I am satisfied that no significant adverse impacts are likely to occur.

#### Bats

- 9.5.27 There will be imperceptible impacts to bats due to destruction or disturbance of bat roosts, severance of commuting routes/feeding areas and

disturbance/displacement due to lighting. There are only 17 trees located within the zone of potential effect to bats and all of these were considered to have low suitability for roosting bats. 5m sections of hedgerow will be permanently removed at 9 locations, all of which are evaluated as of local importance to bats. Temporary bat crossings structures will be installed at severed hedgerows proximal to areas of either high bat activity or roost locations in order to avoid effects from the severance of these features during works. Locations where temporary removal of field boundaries will occur are considered of low importance for feeding. Lighting at the temporary construction compounds will be cowed and lights will not be directed towards any bat roosts or key commuting routes.

### Badger

9.5.28 Impacts to badger from habitat loss will not be significant. There will be a total permanent land use change within 500m of all 7 identified badger setts of 0.17ha. This represents 0.05% of available habitat. There will be moderate impacts to this species due to disturbance and displacement due to the proximity of a set to the cable trenching. However, construction activity will be precluded during the main breeding season and completed during daylight hours to mitigate potential impacts. Concerns have been raised by some of the observers regarding the potential for the spread of Bovine TB as a result of displacement by badgers. It is detailed by the applicant in their response that displacement effects are not likely to be significant and from the consultation process, it was evident that Bovine TB outbreaks have not been a significant issue in recent years. Having regard to the foregoing, and in particular due to the low level of setts potentially affected by the development, I am satisfied that this is not a significant potential environmental impact.

### Otter

9.5.29 The EIAR identifies that there is potential for significant negative effects to the otter population due to the sensitivity of this species and evidence of the presence of otters in proximity to 5 no. watercourse crossings. A range of additional mitigation measures (referred to as AMM-01 in the EIAR) are proposed including confirmatory surveys and ongoing monitoring for three years. In this context, the residual impact from disturbance/displacement to the otter species will be slight.

#### Irish Hare/Pine Marten/Red Squirrel/Fallow Deer

9.5.30 The impact of habitat loss to Irish Hare, Pine Marten, Red Squirrel and Fallow Deer will be 'not be significant to slight' due to the fact that the extent of land use change will be low and the wide availability of suitable foraging. There will be some moderate impacts during the construction phase, however, activity will be temporary and all species are expected to return with no permanent displacement considered likely.

#### Amphibians Reptiles

9.5.31 It is anticipated that there will be no impacts to amphibians and reptiles as a result of the project.

#### Marsh Fritillary Butterfly

9.5.32 The Marsh Fritillary Butterfly is the only protected butterfly species in Ireland. During surveys, suitable habitat patches were identified at 2 locations and larval webs were discovered during surveys undertaken between 2016 and 2017. It is detailed that impacts to the Marsh Fritillary Butterfly will not be significant because there will be no permanent loss of suitable habitat. There will be some temporary loss of habitat during the construction phase. This however, amounts to less than 0.6% of the total suitable habitat present and any impacts will be short term due to the fact that the habitat will be restored. Objections to the development on the basis of impacts to the Marsh Fritillary Butterfly are raised by some of the observers due to concerns regarding loss of habitat. I note however, the extensive surveys undertaken by the applicant and I am satisfied that potential loss of habitat will be minor. Regard must also be had to the fact that the surveys undertaken revealed the absence of Marsh Fritillary larvae webs in the habitats to be lost.

#### **Conclusion**

9.5.33 I have considered all of the written submissions made in relation to biodiversity, in addition to those specifically identified in this section of the report. I am not satisfied based on the information submitted that ex situ effects on the SPA have been fully considered and evaluated and that the impacts identified to the Hen Harrier species in terms of permanent loss of potential foraging habitat would be avoided, managed and/or mitigated by the measures, which form part of the proposed scheme, the proposed mitigation measures and through suitable

conditions. Nor am I satisfied that the temporary loss of habitat within the SPA would not adversely affect this species or that the use of concealed roads is an appropriate measure to mitigate against permanent loss of habitat within the SPA. In this regard, I consider that the proposed development may have an unacceptable direct or indirect impact in terms of biodiversity particularly to the Hen Harrier species. I am satisfied that cumulative effects are not likely to arise and that approval should not be withheld on the grounds of such cumulative effects. Having regard to these concerns, I also draw the Board's attention to the consideration of routing options (addressed in section 8.5 above). It is my opinion that it has not been demonstrated that the route option chosen and its environmental effects are the least damaging from a biodiversity point of view and that reasonable alternatives are not available in the circumstances.

## 9.6 **Land, Soil, Water, Air and Climate**

9.6.1 Land, Soil, Water, Air and Climate factors are dealt with under Chapters 9, 10, 11, 12 and 13 of the EIAR. I have considered these factors under their five respective headings as follows:

### **Land**

9.6.2 The principal land use in the area of the development is permanent agricultural grass land and commercial plantation forestry. Public roads, county roads and private unsurfaced farm access roads serving domestic houses, farms and forest also feature. Part of the development lands fall within a Natura 2000 site (SPA 004165 – Slievefelim to Silvermines Mountains). The main potential effects to land relates to a loss of connectivity between parcels of land due to the presence of works and associated works area boundaries and the temporary loss of use of the lands during the construction phase and for a short period during the operational phase until the works area become re-vegetated. A number of Project Design Environmental Protection Measures to mitigate potential negative impacts to land are set out in Table 9.6 and 9.13 of the EIAR. Best practice measures are also set out.

9.6.3 The development will result in some negative impacts to existing agricultural lands which must be fenced off and thus become unavailable for farming use during the construction phase. The area however, affected by the construction phase

constitutes 18.9 ha spread over 40 no. landholdings with a total area of c. 811 ha. In this context, the significance of the impact will be imperceptible having regard to the small scale of lands subject to the works, the temporary duration of the works and their reversibility.

- 9.6.4 Approximately 46% of the UWF Grid Connection area is located on forestry lands, with 18.3 hectares of lands within construction works areas spread across 5 forestry landholdings. Forestry lands within the construction works area will be fenced off and unavailable for forestry use during the construction phase and in the early operational phase until vegetation has re-established. The significance of the impacts to forestry land will be imperceptible given that the extent of land affected is just 1% of the forestry landholdings and that the works will be temporary and reversible.
- 9.6.5 I am satisfied that impacts to land will generally be short term and that the impacts will generally be reversible when the lands become re-vegetated. No residual impacts would result on land use in the short term (construction phase) or the long term (operational phase).

### **Soil**

- 9.6.6 Soil in the study area comprises mainly mineral or organic topsoil over glacial tills with minor sections of blanket bog. Alluvium and fluvio-glacial sand and gravels are also present along the larger watercourses. 32 no. trial pits were undertaken at the substation site and along the underground cable route in order to assess soil and subsoil character, subsoil depth and ground conditions. Investigation of 2 boreholes at each of the three main river crossings along the cable route was also carried out to determine subsoil and bedrock conditions. Overall the soil, subsoil and bedrock is considered to have low to medium geological importance.
- 9.6.7 In total c. 14,050m<sup>3</sup> of geological material will be permanently excavated and this will mainly arise from UGC trenching/joint bays, Mountphilips Substation and grid connection access roads. 8,370m<sup>3</sup> of the excavated material will be stored along the works area as linear berms and the remainder (5,020m<sup>3</sup>) will be reinstated within the works area. 660m<sup>3</sup> of spoil from the public road excavations will be removed to a licenced waste facility. In addition, up to 11,140m<sup>3</sup> of soils will be excavated from the construction works area boundary.

- 9.6.8 In the UWF Grid Connection study area, there are three designations, including one County Geological Heritage site known as Rear Cross Moraines which is located to the south of the 110kV UGC. The route of the 110kV passes through the unaudited mapped circular boundary of the heritage site, however, field surveys in the area found no indication of the presence of moraines/eskers in the areas ahead or along the 110kV UGC route.
- 9.6.9 The other two designated sites along the 110kV UGC relate to ecological, habitat based designations – upland blanket bogs at Mauherslieve Bog NHA and Bleanbeg Bog NHA (c. 140m of the 100kV UGC passes through Beanbeg Bog NHA along an existing forestry track) and river habitat and associated species in the Lower River Shannon SAC (c. 70m of the 110 kV UGC passes through the SAC along an existing farm track close to the Newport River crossing).
- 9.6.10 It is detailed in the EIAR that the design of the development has ensured that sources of effects are not located in either the Lower River Shannon SAC or Bleanbeg Bog NHA boundaries. There will be no temporary or new permanent access roads; no temporary or permanent storage of overburden; construction traffic and works will be confined to the existing tracks; and all soil excavated from these tracks will be reinstated in the trench following completion of construction works. Project design environmental protection measures are also proposed to prevent peat slippage, reduce erosion of soils and prevent compaction and contamination of soils.
- 9.6.11 It is detailed in the EIAR that there will be a slight impact from the excavation and relocation of soils, subsoil and bedrock during the construction of the project. Impacts in terms of compaction, erosion and contamination will be imperceptible.
- 9.6.12 Within the Lower Shannon River SAC, the underground cable will be placed in an existing farm track in the SAC and all of the excavated material reinstated back in the trench. It is considered that the construction of the underground cable will not directly affect the qualifying interests of the River Shannon SAC. In the Bleanbeg Bog NHA, it is identified in the EIAR that there is no blanket bog remaining on the existing track, as it was removed during the construction of the forestry access road. There is, therefore, no potential for excavation or relocation effects to peat.



The cable will be placed in the subsoil not peat, and all the excavated material will be placed back in the trench inside the NHA.

- 9.6.13 Project Design Environmental Protection Measures will be put in place to prohibit refuelling, storage of fuel overnight and overnight parking within the SAC/NHA thus preventing significant leaks of fuel. Contamination from cement will be limited to the placement of very small volumes of semi dry lean mix concrete in the cable trench along the 70m of existing farm road and 140m of forestry road.
- 9.6.14 I am satisfied, subject to the mitigation measures proposed, that the development will have no impact on soils and that there will be no residual impacts.

### **Water**

- 9.6.15 With respect to surface water, the existing environment comprises regional and local surface water bodies, the majority of which are within the River Shannon catchment. Part of the cable route is located within the Clodiagh River catchment, which is in the regional River Suir catchment. Works at the Newport (Mulkear) River and Bilboa River take place within the Lower River Shannon SAC boundary. Works in the Clodiagh River catchment take place c. 12km upstream of the Lower River Suir SAC boundary. The cable also intersects with the Bleanbeg NHA for c. 140m along an existing forestry track. A temporary trench will be constructed through two areas of wet grassland which support a population of Marsh Fritillary Butterfly.
- 9.6.16 In respect of groundwater, the UWF Grid Connection is mainly located within the Slieve Phelim Ground Water Body Catchment and the Templemore A: Ground Water Body Catchment. There are two private wells within a 50m corridor downstream of the works.
- 9.6.17 The majority of watercourses intercepted by the cable are drains or minor streams. The cable also intercepts a number of large stream crossings as well as the Newport, Clare and Bilboa Rivers. In stream works are proposed at 38 of the 66 watercourse crossings along the route. This is because the majority of watercourse crossing points are located on existing tracks in forestry where culverts are already in place. No instream works are proposed for the rivers and these will be crossed utilising a directional drilling technique.

- 9.6.18 Excavation of 41 trial pits to assess existing and soil and groundwater conditions and 2 boreholes at each of the three river crossings was undertaken. Surface water sampling at 16 locations was carried out.
- 9.6.19 Potential effects to water may arise from in stream works, conifer plantation tree felling, earthworks excavations (including substation foundations), dewatering of excavations, watercourse crossing works, directional drilling, contamination by fuels, chemicals, cement based compounds, increased flood risk and runoff from permanent access roads.
- 9.6.20 It is detailed in the EIAR that a range of Project Design Environmental Protection Measures (33 no.) are built into the design of the project in order to prevent contamination of surface water and groundwater and to prevent sedimentation release. These are described and set out in detail in the report – refer to tables 11.20, 11.27, 11.36, 11.43, 11.50, 11.57 and 11.64. Best Practice Measures are also set out.
- 9.6.21 I note that concerns have been raised by one of the observers regarding the efficacy of measures such as siltbusters to protect the aquatic environment. This issue is comprehensively addressed by the applicant in their response to the observations and it is noted that there is no reliance on a single type of drainage measure at any of the proposed works areas. I also note that Inland Fisheries Ireland, whilst making recommendations regarding conditions to be imposed, raise no objections to the mitigation measures outlined in the EIAR including the proposed use of siltbusters. I am satisfied that the efficacy of these measures is robust.
- 9.6.22 Having regard to the mitigation measures proposed, it is stated in the EIAR with regard to local surface water bodies there will be:
- Slight to moderate morphological impacts to watercourse due to in stream works on local surface water bodies.
  - Slight to imperceptible impacts to surface water quality during conifer plantation tree felling.
  - Imperceptible to slight impacts to surface water quality due to earthworks.
  - Imperceptible impacts to water quality from dewatering of excavations.

- Imperceptible to slight impacts to surface water quality due to watercourse crossing works.
- Imperceptible impacts to surface water quality during directional drilling works.
- Imperceptible impacts to surface water due to contamination by fuels, oils and chemicals.
- Imperceptible impacts from cement based compounds.
- Imperceptible impacts from increased flood risk.
- Imperceptible impacts to surface water quality due to runoff from permanent hardstanding surfaces.

9.6.23 In relation to local groundwater bodies, groundwater quality impacts due to contamination by fuels, oils, and chemicals are deemed to be imperceptible, as are impacts from cement based compounds and dewatering excavations.

9.6.24 In terms of local wells and springs, 2 local wells are identified. It is noted that there will be no negative impacts particularly due to the fact that the trench is shallow and the two wells are deep bored wells. Therefore, inflows to the wells are most likely from deeper bedrock than shallow springs or surface water. In this context, concerns raised by observers regarding potential impacts to private wells are in my view without substance.

9.6.25 The EIAR also concludes that impacts on the Lower River Shannon SAC will be imperceptible and that impacts to the Lower River Suir SAC will be either imperceptible or that there will be no impact. Impacts to the Bleanbeg Bog NHA will be neutral. In terms of local water dependent habitats and particularly the Marsh Fritillary habitat, there will be no alteration of the wet habitat drainage within the works area, due to the shallow and temporary nature of the cable trench which will be backfilled; the natural ground surface will be reinstated after works are complete and all impacts will be brief and temporary. The significant of the impacts will, therefore, be imperceptible.

9.6.26 The EIAR also includes a site specific flood risk assessment. This identifies that due to the elevated nature of the majority of the construction works areas, the majority of the works, including the location of the substation, are not located within

any mapped fluvial or pluvial flood extent zones and are considered to be area at low risk to flooding (located within fluvial Flood Zone C (low risk)).

9.6.27 I am satisfied, subject to the mitigation measures proposed, that the development will have no significant impacts on water. Residual impacts during construction and operation will be negligible.

#### **Air (Air Quality, Noise, Vibration, EMF)**

9.6.28 The issue of air is addressed in Chapter 12 of the EIAR and covers the factors of air quality, noise and vibration levels and electromagnetic field.

9.6.29 The subject site is located in a predominantly rural area. Existing levels of air pollutants in the area is low and there are no significant sources of noise or vibration in the vicinity. Due to the absence of any intensive power and communications infrastructure, there are minimal levels of electric and magnetic fields in the area.

9.6.30 The principal potential effects from the project relate to increased levels of pollution and dust, increased noise and vibration levels and an increase in electromagnetic fields. A number of design environmental protection measures are incorporated into the project to mitigate against such potential effects. These include controls on the hours of construction activity and the implementation of an Environmental Management Plan - see Table 12.22.

9.6.31 In terms of dust, and its impact on local residents and the community, it is stated in the EIAR that there will be a slight impact from dust caused by construction works. Dust emissions will arise from construction activities such as excavations, earth moving and backfilling, particularly during dry and windy weather conditions. Vehicles transporting potentially dusty material to and from the site also have the potential to cause dust generation along the haul routes. Increases in noise levels will have a moderate effect during the construction phase. The impacts will be primarily from plant and machinery and excavation works. There will however, be no impact from the operating Mountphilips Substation as it will not likely be heard above existing background noise levels at the nearest residence which is over 385 metres away from the substation.

9.6.32 The significance of the impacts from an increase in electromagnetic fields will be imperceptible. The maximum level of magnetic fields generated directly above the

underground cable is calculated to be 54  $\mu\text{T}$ . This is significantly below the International Commission on Non Ionizing Radiation Protection Electromagnetic Field safe reference of 100  $\mu\text{T}$ . The worst case increase of magnetic field at the houses nearest the development will be still less than 1/50<sup>th</sup> of the guidelines limit. There is no increase in magnetic fields in Kilcommon National School, nor any increase in background electric or magnetic fields and no increase in electric fields at any property or community facility. The significance of the impacts of potential increases in electromagnetic fields to transient people is also considered and determined to be imperceptible to slight.

9.6.33 Whilst I acknowledge that there may be some impacts to local residents and the local community during the construction of the project, I consider that these impacts will generally be short term and can be appropriately managed and mitigated through the implementation of an Environmental Management Plan and good construction management practice. Appropriate measures have been outlined in the EIAR in this regard. I am satisfied that subject to the implementation of such measures that no residual impacts on air quality are anticipated during the construction phase. During the operational phase, noise emissions from the substation will be imperceptible. This coupled with the distance of the substation from the nearest sensitive residential receptors will ensure no adverse impacts. In this regard, I am satisfied that there will be no significant impacts in terms of noise, air quality, vibration or EMF once the development is operational.

### **Climate**

9.6.34 It is identified in the EIAR that the development will have a significant and positive impact on the climate. The grid connection is required to facilitate the development of the Upperchurch Windfarm. The development as a whole will reduce the need for electricity from fossil fuels and, therefore, reduce greenhouse emissions. The amount of electricity that will be exported from the windfarm will be approximately 2% of the total wind electricity made in Ireland.

9.6.35 I note the comments by a number of the observers regarding the efficacy of wind power and the assertion that wind turbines do not reduce carbon emissions and thus do not have a positive impact on Climate. This issue has been addressed in Section 8.3 above. As noted, the promotion of wind energy as part of Ireland's

Renewable Energy Strategy is strongly advocated for at a national, regional and local level. It is detailed by the applicant that the latest SEIA report “*Energy Related CO<sub>2</sub> Emissions in Ireland 2005-2016*” lists that in 2016, avoided CO<sub>2</sub> emissions due to wind power generation were over 2 million tonnes of CO<sub>2</sub>. None of the observers provide in my opinion, a substantive and overriding argument as to why the stated government policy of supporting wind energy as an integral part of the transition to a low carbon economy should be discounted.

## **Conclusion**

9.6.36 I have considered all of the written submission made in relation to land, soil, water, air and climate, in addition to those specifically identified in this section of the report. I am satisfied that the impacts identified would be avoided, managed and/or mitigated by the measures, which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of land, soil, water, air and climate. I am also satisfied that cumulative effects are not likely to arise and that approval should not be withheld on the ground of such cumulative effects.

## **9.7 Material Assets, Cultural Heritage and Landscape**

9.7.1 Material Assets – Built Services and Roads are addressed in Chapter 14 and 15 of the EIAR. Cultural Heritage is dealt with under Chapter 16 and Landscape in Chapter 17. I have set out my assessment of these factors below.

### **Material Assets – Built Services**

9.7.2 Built services in the vicinity of the site include water main pipes, overhead electricity lines, overhead telephone lines and some underground cables which form part of the Eir network. There is a water treatment plant which supplies the towns of Newport and Ballina and the village of Birdhill and a reservoir at Knocknabansha which supplies Kilcommon and Rearcross villages. The underground water mains related to these are located in and along public roads. There are no group scheme private water pipes or public waste water pipes in proximity to the development. There are no individual on site septic tank and treatment systems located close to construction works areas. The EIAR also notes that there are privately owned telecommunications masts emitting wireless signals and a small Eir exchange

building in Kilcommon Village. In terms of the Electricity Transmission System assets in the vicinity, there are two high voltage lines near Newport which are both connected to the Killonan Station, near Limerick City. The Mountphilips Substation will connect into the Killonan Nenagh 110 kV Overhead line.

- 9.7.3 Potential effects on such built services could arise from damage occurring during the construction and excavation works, thus causing an interruption of supply. The EIAR also identifies that some minor works will be required to some existing telephone and electricity lines which will require an outage of the line for a short period of time (4-8 hours). However, customers will be informed in advance of such works. Project Design Environmental Protection Measures to mitigate potential impacts are set out in Table 14.8.
- 9.7.4 In relation to existing built services and utilities, including electricity infrastructure, I am satisfied that these have been identified and that maps of such services and utilities would be made available to the design and construction team, who would in turn consult with the service providers to ensure no damage to the infrastructure occurs. Confirmatory surveys would be carried out ahead of works to identify any new services or incorrect mapping. The EIAR also states that goal posts will be used as an environmental protection measure to protect existing overhead lines and a foreman or banksman will guard existing underground pipes during excavation works. Accordingly, I am satisfied that safety precautions can be determined at detailed design stage and subject to good site management during the construction phase, services and utility infrastructure can be protected. There will be no residual impacts to material assets – built services.
- 9.7.5 I note the concerns raised by one observer regarding potential impacts on fixed wireless broadband. It is noted that Condition 13 of the Upperchurch Windfarm permission (Planning Authority Reference 13/510003/An Bord Pleanála Reference 243040) requires that in the event that the turbines cause interference to telecommunications signals, that effective measures shall be introduced to minimise interference with telecommunication signals in the area. I am satisfied that this issue is addressed under the parent permission.

### **Material Assets Roads**

- 9.7.6 During the construction phase of the project, the main roads affected by the development are the R503 Regional Road between Newport and Ballycahill, the R498 at Knocknabansha and the network of local roads radiating from the regional road that will be used to access construction areas for the substation and underground cable. Falling Weight Deflectometer Testing of the local roads was undertaken to determine their load bearing capacity which indicated that there is stiff to moderate subgrade support under the roads and that the road pavements are weak.
- 9.7.7 There are 7 buried structures under the L2114-0 Road comprising concrete and stone culverts and a stone arch bridge. These were surveyed and found to be in good condition with sufficient depth of cover in which to install underground cables without risk to the culvert structure. Cables will be installed in a flat formation over the stone bridge area and, therefore, the integrity of the bridge will not be affected. Buried structures along the haulage routes were also found to be in good condition and will not be affected by construction traffic.
- 9.7.8 Baseline traffic surveys undertaken confirmed that all of the roads are lightly trafficked and have an average of 96.7% capacity during the peak traffic periods. The main potential effects to the road network include damage to road boundaries and road pavements during the construction phase. No cable works are required for the grid connection in the Regional Roads with the exception of one cable crossing. In the local road network, trenching will occur at 12 locations and ducting at three sections.
- 9.7.9 The construction phase of the project will be approximately 6 to 8 months. It will result in the permanent removal of 310m roadside boundary and temporary removal of 55m of roadside boundary. The development will also result in the short term closure of the L6085-0 (3 days), some half lane closures on the L2156-11 and L2114-0 and a stop go system at road crossing locations. There is potential for damage to the road pavement from excavation during trenching works and additional construction traffic. The EIAR notes that a number of Environmental Protection Measures are built into the design of the project including that on completion of the construction works, road surfaces will be repaired and resurfaced and roadside boundaries reinstated. A Traffic Management Plan will also be implemented to minimise the traffic impact of construction. Table 15.4 and 15.7



sets out further detail of mitigation measures to avoid potential or likely significant impacts.

- 9.7.10 The potential impacts of damage to road boundaries is anticipated to be imperceptible due to the small number of permanent entrances required and the fact that temporary entrances will be reinstated. Similarly the EIAR states that the impacts from damage to road pavements will be imperceptible, noting that the regional roads are lightly trafficked and have spare capacity, thus are capable of accommodating additional construction traffic with no negative impact. Confirmatory condition surveys will be undertaken along the routes of concentrated construction traffic and any damage repaired. The local road network will be impacted during the construction phase at trenching locations. All sections subject to such works will be reinstated by full width strengthening of the affected road to 5 metres beyond the works area on both sides. In terms of potential impacts to road users, it is anticipated that construction traffic associated with the works will have a negligible impact to the network capacity and operation due to the fact that these roads are lightly trafficked and that road works will be brief and temporary in nature.
- 9.7.11 During the operational phase, it is anticipated that the development will have neutral or no impacts. The Mountphilips substation will be remotely monitored and secured and will be inspected on a monthly basis. Access to the joint bays/substation will occur over a total of c. 13 days per year. Traffic volumes associated with the operational phase are, therefore, negligible.
- 9.7.12 I note the concerns raised by one observer that the development will preclude access to lands at Bealaclave. It is detailed by the applicant that 1,280 metres of trenching along the public road L2114-0 will be carried out over a period of approximately 20 days. Whilst there will be some delays when the works are ongoing, traffic management measures will be implemented to minimise these. I, therefore, considered that such impacts will be short term and temporary and will not preclude access to the observer's lands.
- 9.7.13 Subject to the mitigation and best practice measures outlined in the EIAR including the implementation of a Traffic Management Plan and conditions which would be attached in the event of an Approval, I am satisfied that no significant residual impact would likely arise on the road network surrounding the proposed

development during the construction phase. Following completion of the works, traffic volumes associated with ongoing maintenance works would be minimal and I am satisfied that no specific mitigation measures are necessary.

### **Cultural Heritage**

- 9.7.14 In considering cultural heritage, there are 46 recorded legally protected sites within 500 metres of the grid connection construction works area, with 2 sites being in close proximity namely the ringfort in Castlewaller c. 35m north of the underground cable and a wedge tomb in Knockmaroe c. 20m east of the cable. Archaeological test excavations were carried out at these two locations, however, no features or artefacts were discovered during these excavations. There are a further 5 sites listed on the National Inventory of Architectural Heritage Building Survey, 6 on the National Inventory of Architectural Garden Survey and 25 sites shown on historic OS maps. Survey work undertaken identified a total of 209 previously unrecorded sites comprising wells, springs, townland boundaries, quarries and lime kilns.
- 9.7.15 Potential effects on cultural heritage could arise from groundworks which have the potential to damage such sites or objects associated with them. It is detailed in the EIAR that such effects can occur to archaeological sites and townland boundaries. The close proximity of new above ground structures to archaeological sites can also cause visual impact to these sites, reducing the quality of the visual amenity or character and setting of a monument or site. It is proposed that there will be archaeological monitoring of all initial groundworks during the construction stage. Tables 16.8, 16.5, 16.22, 16.29 set out relevant mitigation measures.
- 9.7.16 In terms of potential visual impact, it is determined that the impact will be imperceptible due to the low lying location of the substation and surrounding vegetation which will completely screen it. Works will be carried out within the area of Mountphilips and Oakhampton demesne. It is stated in the EIAR that these sites have been subsumed onto the modern landscape in the area, with Mountphilips having virtually no recognisable features visible and the peripheral features of Oakhampton demesne being also unrecognisable. Works in Castlewaller Demesne are confined to forestry track. Therefore, it is considered that there is no potential for impacts to these three sites. Potential visual impacts are deemed to be negligible.

9.7.17 Potential damage to townland boundaries is predicted to have a slight impact due to the limited sections of townland boundaries to be permanently and temporarily removed to provide access, the fact that these boundaries have already been extensively altered due to farming and forestry practices and the fact that there will be monitoring of all groundworks. The EIAR also notes that impacts to unrecorded subsurface sites is likely to be slight as due to continuous intensification of agriculture and forestry in the study area, finds will likely include only levelled earthworks, backfilled cuts and areas of large scale burning or artefact scatters. It is unlikely that any fully intact remains of special archaeological significance will be uncovered. There is unlikely to be any impacts to recorded legally protected sites due to the distance of such sites from the construction works area.

9.7.18 The submission by the Department of Culture, Heritage and the Gaeltacht notes that sites like fording points have high potential for artefactual material and associated marsh lands also hold potential to retain archaeology. It recommends that all excavated material from all watercourses to be spread and metal detected as part of the finds retrieval strategy and that all works within watercourses (streams and rivers) or wetland areas to be subject to close archaeological monitoring. Should the Board be minded to grant permission, an appropriate condition should be attached to the Approval, requiring such investigation, to ensure that the DCHG are consulted and made aware of any archaeological finds and that all works within watercourses or wetland areas be subject to archaeological monitoring.

### **Landscape**

9.7.19 The landscape setting of the majority of the UWF Grid Connection is that of a rugged rural upland comprising of moderate steep sided valleys characterised by a combination of forestry and agricultural grassland. The rural population is dispersed. Nearer the Mountphilips Substation, the landscape is characterised by a more gently rolling pastoral landscape of fields, hedgerows and mature treelines.

9.7.20 Measures to reduce the visual impact of the development include minimising the extent of roadside boundary removal, construction management measures and ensuring that new permanent roads within the Slievefelim to Silvermines Mountains SPA are concealed under a vegetative layer of mature heathers. Table 17.11 and

17.18 set out relevant mitigation measures. Potential effects of the Grid Connection are identified to be impacts on landscape character and visual amenity.

- 9.7.21 It is detailed in the EIAR that there will be an imperceptible impact from the alteration of land cover and vegetation patterns. Whilst there will be some temporary impacts due to excavation works, felling of forestry and removal of hedgerows, the vast majority of the works area will be reinstated and hedgerows and trees will be restored or replanted. There will be slight to imperceptible impacts due to the intensification of activity causing a reduction on the rural landscape during the construction phase. Such impacts however, will be short term and the site with most activity – the Mountphilips Substation, will be well screened by existing terrain and vegetation which will restrict the extent that construction activity that can be seen.
- 9.7.22 During the permanent operation stage, the new substation will add a permanent built structure to the landscape. The substation however, is substantially screened from view by landform and high field and roadside boundaries. In this regard, the impacts from the intensification of the built development and reduction in the integrity of the rural landscape pattern is considered to be slight to imperceptible and it is not considered the substation will have any negative impacts in terms of visual amenity.
- 9.7.23 In terms of visual amenity, there will be an intensification of activity during the construction stage which will cause slight to imperceptible impacts. The greatest intensity of activity will occur at the site of the proposed substation. However, as the site is screened, impacts will be minimised. Visible construction activity for the underground cable will be dispersed between the new substation site and the windfarm substation site. Construction activity will occur at multiple small, independent sections of the cable route.
- 9.7.24 I am satisfied that the development will have no material adverse impacts in terms of landscape or visual amenity and once the mitigation measures are employed, I am satisfied that no residual impacts are anticipated during either the construction or operational phase.

## **Conclusion**

9.7.25 I have considered all of the written submissions made in relation to material assets, cultural heritage and the landscape, in addition to those specifically identified in this section of the report. I am satisfied that the impacts identified would be avoided, managed and or mitigated by the measures, which form part of the proposed scheme, the proposed mitigation measures and through suitable conditions. I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect impacts in terms of material assets, cultural heritage and the landscape. I am also satisfied that cumulative effects are not likely to arise and that approval should not be withheld on the grounds of such cumulative effects.

## 9.8 **Interactions between the Factors**

9.8.1 I have considered the interrelationships between factors and whether these may as a whole affect the environment, even though the effects may be acceptable when considered on an individual basis. Chapter 15 provides a summary of the impact interactions.

9.8.2 In particular, the potential arises for population and human health to interact with other factors including Air (increased levels of ambient dust and noise and EMF), Material Assets – Roads (increased traffic and road works), Landscape (visual impacts), Water (water quality), Material Assets – Built Services (contamination or disruption of public piped water supply) etc.

9.8.3 Potential cross factor effects to Biodiversity could be caused by Soils (excavation, relocation, erosion and contamination effects to soils), Water (decreased in water quality as a result of cross factor soil effects and morphological impacts to watercourse during crossing works, along with changes in drainage regimes in water dependent habitats due to cross factor soils effect) and Air (due to dust soiling, increased ambient noise and vibration levels. The details of all other interrelationships are set out in Chapter 15, which I have considered.

9.8.4 I am satisfied that effects as a result of interactions, indirect and cumulative effects can be avoided, managed and/or mitigated by the measures which form part of the proposed development, mitigation measures, and suitable conditions. There is, therefore, nothing to prevent the approval for the development on the grounds of significant effects as a result of interactions between the environmental factors.

## 9.9 **Cumulative Impacts**

9.9.1 Section 6.11 and 6.12 of the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (August 2018) sets out guidance regarding cumulative effects. This states:

*“Effects are not to be considered in isolation but cumulatively i.e. when they are added to other effects. A single effect on its own may not be significant in terms of impact on the environment but, when considered together with other effects, may have a significant impact on the environment. Also, a single effect which may, on its own, have a significant effect, may have a reduced and insignificant impact when combined with other effects.*

*The Directive requires that EIAR describes the cumulation of effects. Cumulative effects may arise from:*

- *The interaction between the various impacts within a single project.*
- *The interaction between all of the different existing and/or approved projects in the same area as the proposed project.”*

9.9.2 The EIAR sets out a detailed assessment of the potential cumulative impacts of the project, the methodology of which is detailed in Section 5.6. The cumulative assessment considers the impacts of the proposed development in conjunction with all other elements of the whole UWF project namely:

- UWF related works
- UWF replacement forestry
- Upperchurch Windfarm
- UWF other activities

9.9.3 Other projects or activities in the area were scoped using geographical and time frame boundaries and conceptual site model exercises. The list of other projects or activities included in the Environmental Factor Cumulative Evaluation are set out in Table 5.11 of the EIAR and include the consented Bunkimalta and Castlewaller windfarms as well as the existing Milestone Windfarm.

9.9.4 A cumulative evaluation of the effects of the subject development together with the other elements of the whole UWF project and other relevant projects or activities on the environment is presented in each environmental factor topic chapters. The

EIAR concludes for each factor that the cumulative effect of the development will not be significant.

- 9.9.5 It is noted that a number of the observers refer to the O' Grianna and Others v. An Bord Pleanála case (IEHC 632, 12/12/2014) and state that in light of this decision, that the project cannot be split, must be assessed as a whole project and that a cumulative assessment cannot rely on the surveys and analysis undertaken when the windfarm development was consented. It is submitted that the windfarm and grid connection must be assessed as one entire project. It is also noted that Tipperary County Council issued a Further Information request in respect of application 18/600913 (UWF related works) on the basis that they were not satisfied regarding the completeness of the EIAR submitted as it relies upon the EIS and EIA of the 2013 wind farm application in the presentation of cumulative effects.
- 9.9.6 In O' Grianna v An Bord Pleanála, the court held that the grid connection was an integral part of the development and could not be considered as a separate project. The implication of this decision is that applications for wind farm developments must include details of the proposal for the grid connection and that the cumulative effects of both windfarm and grid connection must be assessed. However, as highlighted by the applicant in their response to the submissions, subsequent cases (O' Grianna and Others v An Bord Pleanála IEHC 7 (2017), North Kerry Wind Turbine Awareness Group v An Bord Pleanála IEHC 126 (2017) and Alen-Buckley v An Bord Pleanála IEHC 541 (2017)) have confirmed that the law does not require that planning permission for all integral parts of large projects must be obtained at the same time, or as part of a single application to one consenting authority.
- 9.9.7 It is noted in this instance, that the wind farm permission (Planning Authority Reference 13/510003/An Bord Pleanála Reference 243040) was permitted prior to the O' Grianna decision. There is nothing to infer from the O' Grianna decision that the applicant must now carry out a retrospective EIAR assessing the cumulative impact of the wind farm in conjunction with the grid connection. The wind farm has been permitted by the Board, fully assessed and determined to be in accordance with the proper planning and sustainable development of the area.

- 9.9.8 What is currently before the Board is the grid connection to serve this permitted windfarm. Having regard to the O' Grianna decision, the applicant has considered the impact of the subject development cumulatively with the whole Upperchurch Windfarm project. This in my view is a logical and appropriate approach to considering cumulative impacts. It is noted that Inspector's report on Strategic Infrastructure Pre Application Consultation (Reference VC0098) recommended that if the applicant was undertaking an EIAR, that it should have regard to the cumulative effects with the permitted windfarm. This is the approach that has been adopted by the applicant.
- 9.9.9 I do not concur with the views of the observer or indeed Tipperary County Council that the applicants should be required to update the EIAR for the consented windfarm development. This is a permitted development and the guidance on this matter (as set out in the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018) is clear that the cumulative assessment should consider the interactions between all of the different existing and/or approved projects in the same area as the proposed project. It does not state that the applicant should be expected to carry out a cumulative assessment of such approved projects from first principles or reassess the potential environmental impacts of these projects in their own right. The submission by the observer and Tipperary Co. Co. infers that that the applicant should effectively undertake a de novo assessment of the windfarm development including a new EIAR assessing the windfarm and grid connection. As this is a consented development, this in my view is unnecessary and would be an unreasonable and onerous request to the applicant.
- 9.9.10 I am satisfied that the cumulative assessment is robust and fully assesses the impacts of the current proposal for the grid connection and substation in the context of the permitted windfarm development itself and all other relevant existing and approved projects. I also note the applicant's response on this matter and the extent of survey work undertaken to inform the current EIAR. This states that the competent experts who prepared the 2018 EIA Reports reviewed the Upperchurch Windfarm 2013 and 2014 assessments as part of their studies of the baseline environment and studied the area again in 2017, as part of field and desktop studies for the application. These field and desktop studies enabled experts to



ascertain the existing environment and the trends in the existing environment. Having regard to the fact that the windfarm was approved in 2014 and the extensive surveys undertaken to inform the current EIAR, I am satisfied that there is sufficient information to inform a cumulative assessment.

9.9.11 Concerns have been raised by one of the observers that the application has not fully assessed all of the wind turbines operating in close proximity to the proposed development. It is detailed by the applicant in their response that in total, 32 projects and 3 activities were scoped for potential to cause cumulative effects. Bunkimalta windfarm is scoped in as there is the potential for this large project to be constructed at the same time as the UWF Grid Connection project. Windfarms at Knockmealse, Ballinlough, Curraghgraique and Ballinveny were excluded as due to their size and distance, they were considered unlikely to cause cumulative effects. All of the turbines in the Hollyford area to the south are included due to the large number of turbines in this area and its proximity to the Upperchurch area. I am satisfied that all relevant consented and constructed wind farms in the vicinity of the development have been considered that that the cumulative assessment is adequate.

## 9.10 Reasoned Conclusion on Significant Effects

9.10.1 Having regard to the examination of environmental information contained above, and in particular to the EIAR and the submissions from observers and prescribed bodies, the contents which I have noted, it is considered that the main significant direct and indirect effects of the proposed development on the environment are as follows:

**Biodiversity:** Impacts to aquatic habitats and species are likely to arise during the construction phase particularly in terms of decrease to water quality, changes in flow in watercourses, disturbance/displacement of fish, riparian habitat degradation and spread of aquatic invasive species. These impacts would be mitigated against by implementing a range of Project Design Environmental Measures set out in Table 8.40 of the EIAR. These include measures to prevent contamination of water and prevent sedimentation release to water.

Impacts to badgers may arise from disturbance and displacement during the construction phase. Measures including the preclusion of construction works in the

main breeding season within 50 metres of an active badger sett and no construction activity outside of daylight hours will mitigate this impact.

Impacts to bats could occur from destruction or disturbance of bat roosts in trees, severance of commuting routes or feeding areas and disturbance or displacement due to lighting. Significant effects can be mitigated by measures detailed in Table 8.73 of the EIAR.

Impacts to hen harrier will arise from a reduction in or loss of suitable foraging habitat. There will be a net permanent loss of 3.14ha in the wider study area. The significance of this impact is considered to be moderate (negative). I am not satisfied that adequate mitigation measures have been set out in the EIAR to address this issue and that adverse impacts will not occur. The efficacy of measures such as concealed roads within the SPA to mitigate against habitat loss may also be inadequate and, therefore, it cannot be ruled out beyond all scientific doubt that no adverse impacts to the integrity of the SPA will occur.

There is potential for significant negative effects to otters. Mitigation measures will be put in place during construction works including surveys by an experienced otter surveyor, communication of the survey results to the construction team, NPWS and the relevant authorities, control of works within 150m of holts including implementation of appropriate measures such as screening, restriction of working hours, restriction on scale of construction works and the provision of artificial holts if required. The implementation of measures will be supervised by a competent ecologist. Monitoring will take place three years after the completion of construction. The residual impact will be slight.

**Soil:** Impacts to soil could result from excavation and relocation of soils, subsoils and bedrock, compaction, erosion and contamination. Mitigation measures are detailed in Tables 10.17, 10.24 and 10.31 of EIAR. These include measures to prevent peat slippage; to reduce erosion to soils by ensuring that all excavations will be reinstated and landscape immediately after the works and permanent storage berms of soils will be graded and seeded immediately; to prevent compaction, construction traffic will be restricted to the footprint of the works only area and tracking across adjacent ground will not be permitted; and to prevent contamination, all fuels required for construction activities will be stored in bunded, locked storage

containers in a designated location and no refuelling, storage of fuel or overnight parking will be permitted within the designated sites.

**Water:** Potential indirect effects could be caused by construction activities such as sediment laden run off to rivers, streams and drains and surface water quality impacts during conifer plantation tree felling, earthwork excavations, dewatering of excavations, crossing works and directional drilling. Water quality can also be impacted by contaminated fuels, oils, chemical spills and cement run off as well as run off from permanent hardstanding areas and access roads. The morphology of watercourses themselves may be impacted by changes to the shape of the channel due to instream works. Groundwater bodies including local wells and springs can be contaminated by spillage of fuels, oils, cement, dewatering etc. The Bleanbeg NHA and local water dependent habitats may be impacted by changes in drainage regimes. Detailed mitigation measures are set out in tables 11.20, 11.27, 11.36, 11.43, 11.50, 11.57 and 11.64 to prevent adverse impacts including sedimentation effects, to prevent contamination of surface water and groundwater and prevent increased flood risk. These will mitigate any significant effect. There will be slight to moderate impacts to the morphology of watercourses due to instream works. The magnitude of this impact however, is likely to be small due to the relatively minor nature of the watercourses being crossed (most are drains or of low ecological importance) and the distributed nature of the works within several water bodies over a large geographical area.

**Air:** Impacts arising from noise and vibration levels and increases in airborne dust will be mitigated through appropriate construction management measures, limits to hours of construction activity and implementation of an Environmental Management Plan.

**Material Assets Roads:** Impacts during the construction phase include damage to the local road network and increases in traffic volumes particularly HGV's with potential for disruption to residents. In order to prevent or reduce such negative effects, mitigation measures will be implemented including the repair, resurfacing and reinstatement of road surfaces after the construction phase; the implementation of a Traffic Management Plan to control and minimise the traffic impacts of the construction stage and the appointment of a Community Liaison Officer to liaise with the local community on upcoming schedules.

**Cultural Heritage:** Impacts on Cultural Heritage during the construction stage would be mitigated by ensuring archaeological monitoring of all initial ground works during the construction stage with provision made for the resolution of any archaeological features or deposits that may be identified. Impacts on as yet unknown underwater archaeology would be mitigated by the carrying out of an underwater archaeological impact assessment in consultation with the DCHG including provision for resolution of any archaeological finds, if necessary.

**Alternatives:** The development may have an adverse impact on biodiversity. This is as a result of the route selected for the grid connection, which runs in part through an SPA. I am not satisfied, based on the assessment and analysis set out in the EIAR, that in the consideration of potential route options, that adequate weight has been given to biodiversity matters. Lesser damaging alternatives are available that could avoid negative impacts on the environment with regard to biodiversity.

In conclusion, the EIAR has considered that the main direct and indirect effects of the proposed development on the environment would be primarily mitigated by environmental management measures. I am not satisfied however, that following mitigation, no residual negative impacts on the environment would remain as a result of the proposed scheme with respect to biodiversity and the Hen Harrier species. The proposed development may, therefore, have an unacceptable indirect effect on the environment.

## 10.0 **Appropriate Assessment**

### **Introduction**

10.1 Article 6(3) of Directive 92/43/EEC (Habitats Directive) requires that any plan or project not directly connected with or necessary to the management of a European site(s), 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(s) in view of the site(s) conservation objectives. The Habitats Directive has been transposed into Irish law by the Planning and Development Act 2000, as amended, and the European Union (Birds and Natural Habitats) Regulations 2011-2015.

10.2 In accordance with these requirements and noting the Board's role as the competent authority who must be satisfied that the proposal would not adversely affect the integrity of the Natura 2000 site(s), this section of my report assesses if the project is directly connected with or necessary to the management of European Site(s) or in view of best scientific knowledge, if the project, individually or in combination with other plans or projects, is likely to have a significant effect on any European Site, in view of the site(s) conservation objectives.

10.3 Guidance on appropriate assessment is provided by the EU and the NPWS in the following documents:

- Assessment of plans and projects significantly affecting Natura 2000 sites – methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2001).
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (DoEHLG)

10.4 Both documents provide guidance on screening for appropriate assessment and the process of appropriate assessment itself.

### **The Natura Impact Statement**

10.5 The application is accompanied by an NIS which describes the proposed development, the project site and the surrounding area. The NIS contains a Stage 1 Screening Assessment and concludes that a Stage 2 Appropriate Assessment is

required. The NIS outlines the methodology used for assessing potential impacts on the habitats and species within several European sites that have the potential to be affected by the proposed development. It predicts the potential impacts for these sites and their conservation objectives, it suggests mitigation measures, assesses in-combination effects with other plans and projects and it identifies any residual effects on the European sites and their conservation objectives.

- 10.6 The Board should note that the NIS prepared by the applicant relates to three elements of the Whole Upperchurch Windfarm Project – the UWF Grid Connection, UWF Related Works and UWF Replacement Forestry. In this context, a catchment greater than 15km is considered for the likely zone of impact. It is stated in the NIS that the Upperchurch Windfarm element of the project has already been subject to an Appropriate Assessment and it was concluded by the Board that it would not result in adverse effects on the integrity of a European site. It is recognised however, that individual elements of the projects detailed in the NIS may have the potential for in combination effects with the Upperchurch Windfarm on European sites. The NIS, therefore, considers whether those proposed elements either alone or in combination with the Upperchurch Windfarm, as the whole UWF Project will result in adverse effects on the integrity of any European site. In this context, the consideration of the wider zone of impact is considered appropriate.
- 10.7 The NIS report submitted concludes that, subject to the implementation of best practice and the recommended detailed mitigation measures, the proposed development would not have a significant effect either individually or in combination with other plans or projects on the conservation objectives of any European site.
- 10.8 Having reviewed the NIS and the supporting documentation, I am satisfied that it provides adequate information in respect of the baseline conditions. The Board should note however, that I do have concerns regarding the lack of assessment regarding the potential indirect ex situ impacts that may arise to the hen harrier species as a result of permanent habitat loss outside the SPA. In this regard, I am not satisfied that the NIS does clearly identify all potential impacts. This is addressed further in section 10.54 onwards below.

### Appropriate Assessment Screening – Stage 1

- 10.9 I consider that the proposed development of an underground cable grid connection and substation is not directly connected with or necessary to the management of any European site.
- 10.10 In my assessment I have considered the applicant’s Appropriate Assessment Stage 1 screening statement which provides a description of the surrounding area and the proposed development. It predicts the potential effects for these sites in view of their conservation objectives. I have also had regard to the Site Synopsis and conservation objectives of the relevant Natura 2000 sites and to the entirety of the application documentation including submissions received.
- 10.11 Having regard to the information available, nature, size and location of the proposed development and its likely direct, indirect and cumulative effects, the source pathway receptor principle and sensitivities of the ecological receptors, the following sites are considered relevant to include for the purposes of initial screening for the requirements for Stage 2 Appropriate Assessment on the basis of likely significant effects.

European Site (SAC/SPA)	Qualifying Interests (Habitats and Species)  *denotes a priority habitat	Distance of European Site to Proposed UWF Grid Connection cable route	Connectivity
<b>Anglesey Road SAC (site code 002125)</b>	<b>Priority Annex 1 Habitats</b> <ul style="list-style-type: none"> <li>Species-rich <i>Nardus</i> grasslands on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* (6230)</li> </ul>	3.3km	None due to the separation distance and lack of hydrological pathway
<b>Askeaton Fen Complex SAC (site code</b>	<b>Priority Annex 1 Habitats</b> <ul style="list-style-type: none"> <li>Calcareous fens with</li> </ul>	31.4km	None due to the separation distance and

002279)	<p><i>Cladium mariscus</i> species of the Caricion davallianae * (7210)</p> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Alkaline fens (7230)</li> </ul>		lack of hydrological pathway
<p><b>Barrigone SAC</b> (site code 000432)</p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (important orchid sites)* (6210)</li> <li>Limestone Pavement * (8240)</li> </ul> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Juniperus communis formations on heaths or calcareous grasslands (5130)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>Marsh Fritillary (<i>Euphydryas aurinia</i>) (1065)</li> </ul>	44.1km	None due to the separation distance and lack of hydrological pathway
<p><b>Bolingbrook Hill SAC (site code 002124)</b></p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Species-rich <i>Nardus</i> grasslands in siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* (6230)</li> </ul>	6.3km	None due to the separation distance and lack of hydrological pathway



	<p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Northern Atlantic wet heath with <i>Erica tetralix</i> (4010)</li> <li>European Dry Heaths (4030)</li> </ul>		
<p><b>Clare Glen SAC</b> (site code 000930)</p>	<p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles (91A0)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>Killarney Fern (<i>Trichomanes speciosum</i>) (1421)</li> </ul>	4.5km	None due to separation distance and limited connectivity
<p><b>Curraghchase Woods SAC</b> (site code 000174)</p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) * (91EO)</li> <li>Yew Woodlands <i>Taxus baccata</i> woods of the British Isles * (91JO)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>Lesser Horseshoe Bat <i>Rhinolophus hipposideros</i> (1303)</li> </ul>	33.5km	None due to the separation distance and lack of hydrological pathway
<p><b>Glenomra Wood SAC</b> (site code 001013)</p>	<p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the</li> </ul>	11.2km	None due to the separation distance and lack of

	British Isles (91AO)		hydrological pathway
<b>Glenstal Wood SAC</b> (site code 001432)	<b>Annex II Species</b> <ul style="list-style-type: none"> <li>Killarney Fern (<i>Trichomanes speciosum</i>) (1421)</li> </ul>	5.8km	None due to the separation distance and lack of hydrological pathway
<b>Keeper Hill SAC</b> (site code 001197)	<b>Priority Annex 1 Habitats</b> <ul style="list-style-type: none"> <li>Blanket Bogs(*is active bog) (7130)</li> </ul> <b>Annex 1 Habitats</b> <ul style="list-style-type: none"> <li>Northern Atlantic Wet Heath with <i>Erica tetralix</i> (4010)</li> </ul>	2km	None due to the separation distance and lack of hydrological pathway
<b>Kilduff, Devilsbit Mountain SAC</b> (site code 000934)	<b>Priority Annex 1 Habitats</b> <ul style="list-style-type: none"> <li>Species rich <i>Nardus Grassland</i> on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* (6230)</li> </ul> <b>Annex 2 Habitats</b> <ul style="list-style-type: none"> <li>European dry heaths (4030)</li> </ul>	16.9km	None due to the separation distance and lack of hydrological pathway
<b>Lough Derg (Shannon) SPA</b> (site code 004058)	<ul style="list-style-type: none"> <li>Cormorant (<i>Phalacrocorax carbo</i>) (AO17)</li> <li>Tufted Duck (<i>Aythya fuligula</i>) (A061)</li> <li>Goldeneye (<i>Bucephala clangula</i>) (A067)</li> <li>Common Tern (<i>Sterna</i></li> </ul>	10.4km	None due to the separation distance and lack of hydrological pathway

	<p><i>hirundo</i>) (A193)</p> <ul style="list-style-type: none"> <li>Wetland and Waterbirds</li> </ul>		
<p><b>Lough Derg North East Shore SAC (site code 002241)</b></p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion <i>davallianae</i>* (7210)</li> <li>Limestone pavements* (8240)</li> <li>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i>, <i>Salicion albae</i>)* (91E0)</li> <li>Yew Woodlands <i>Taxus baccata</i> woods of the British Isles* (91J0)</li> </ul> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Alkaline Fens (7230)</li> <li>Juniper Scrub – <i>Juniperus communis</i> formations on heaths or calcareous grasslands (5130)</li> </ul>	25.3km	None due to the separation distance and lack of hydrological pathway
<p><b>Lower River Shannon SAC (site code 002165)</b></p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>Alluvial Forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, <i>Alnion incanae</i>, <i>Salicion albae</i>)* (91E0)</li> </ul>	0km	Yes  No direct habitat loss within the SAC however, due to proximity and the nature of the proposed

	<ul style="list-style-type: none"> <li>• Coastal lagoons * (1150)</li> </ul> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Sandbanks which are slightly covered by seawater all the time (1110)</li> <li>• Estuaries (1130)</li> <li>• Mudflats and sand flats not covered by seawater at low tide (1140)</li> <li>• Large shallow inlets and bays (1160)</li> <li>• Reefs (1170)</li> <li>• Perennial vegetation of stony banks (1220)</li> <li>• Vegetated sea cliffs of the Atlantic and Baltic coasts (1230)</li> <li>• <i>Salicornia</i> and other annuals colonizing mud and sand (1310)</li> <li>• Atlantic salt meadows (<i>Glauci-Puccinellietalia maritima</i>) (1130)</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritima</i>) (1410)</li> <li>• Water courses of plain to montane levels with <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i></li> </ul>		<p>works required, the following potential effects cannot be excluded</p> <p>Riparian habitat degradation</p> <p>Spread of aquatic species</p> <p>Decrease in aquatic habitat quality via:  surface water runoff, sediment entrainment or release, release of fuels oils/chemicals, surface/ground water quality impacts, changes in flow regime.</p> <p>Disturbance to otter from activities such as drilling</p>
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	<p>vegetation (3260)</p> <ul style="list-style-type: none"> <li>• <i>Molinia</i> meadows on calcareous, peaty or clayey-silt laden soils (<i>Molinion caeruleae</i>) (6410)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>• Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) (1029)</li> <li>• Atlantic Salmon (<i>Salmo salar</i>) (only in freshwater) (1106)</li> <li>• Sea Lamprey (<i>Petromyzon marinus</i>) (1095)</li> <li>• Brook Lamprey (<i>Lampetra planeri</i>) (1096)</li> <li>• River Lamprey (<i>Lampetra fluviatilis</i>) (1099)</li> <li>• Bottlenose Dolphin (<i>Tursiops truncatus</i>) (1349)</li> <li>• Otter (<i>Lutra lutra</i>) (1355)</li> </ul>		
<p><b>Lower River Suir SAC (site code 002137)</b></p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Alluvial Forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)* (91E0)</li> <li>• Yew Woodlands <i>Taxus baccata</i> woods of the</li> </ul>	<p>4.4km</p>	<p>Yes – Source pathway links exist (via surface water and ground water) to the aquatic QI, potential for significant</p>

	<p>British Isles* (91J0)</p> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Atlantic salt meadows (<i>Glauci-Puccinellietalia maritimae</i>) (1130)</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimae</i>) (1410)</li> <li>• Water courses of plain to montane levels with <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation (3260)</li> <li>• Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels (6430)</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> of the British Isles (91A0)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>• Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) (1029)</li> <li>• White-clawed Crayfish (<i>Austropotamobius pallipes</i>) (1092)</li> <li>• Sea Lamprey (<i>Petromyzon marinus</i>) (1095)</li> <li>• Brook Lamprey (<i>Lampetra</i></li> </ul>		<p>effects cannot be excluded. Potential significant effects include decrease in habitat quality via surface water runoff, sediment entrainment or release, release of fuels oils/chemicals, surface/ground water quality impacts, changes in flow regime, riparian habitat degradation and the spread of aquatic invasive species</p>
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	<p><i>planeri</i>) (1096)</p> <ul style="list-style-type: none"> <li>• River Lamprey (<i>Lampetra fluviatilis</i>) (1099)</li> <li>• Twaité Shad (<i>Alosa fallax fallax</i>) (1103)</li> <li>• Otter (<i>Lutra lutra</i>) (1355)</li> <li>• Salmon (<i>Salmo salar</i>) (1106)</li> </ul>		
<b>Philipston Marsh SAC</b> (site code 001847)	<p><b>Anne 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Transition mires and quaking bogs (714)</li> </ul>	13.1km	None due to the separation distance and lack of hydrological pathway
<b>Ratty River Cave SAC</b> (site code 002316)	<p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Caves not open to the public (8310)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>• Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>) (1303)</li> </ul>	24.6km	None due to the separation distance
<b>River Shannon and River Fergus Estuaries SPA</b> (site code 004077)	<ul style="list-style-type: none"> <li>• Cormorant (<i>Phalacrocorax carbo</i>) (A017)</li> <li>• Whooper Swan (<i>Cygnus Cygnus</i>) (A038)</li> <li>• Light bellied Brent Goose (<i>Branta bernicla hrota</i>) (A046)</li> <li>• Shelduck (<i>Tadorna tadorna</i>)</li> </ul>	16.9km	None due to the separation distance and lack of hydrological pathway

	<p>(A048)</p> <ul style="list-style-type: none"> <li>• Wigeon (<i>Anas penelope</i>) (A050)</li> <li>• Teal (<i>Anas crecca</i>) (A052)</li> <li>• Pintail (<i>Anas acuta</i>) (A054)</li> <li>• Shovelaer (<i>Anas clypeata</i>) (A056)</li> <li>• Scaup (<i>Aythya marila</i>) (A062)</li> <li>• Ringed Plover *<i>Charadrius hiaticula</i> (A137)</li> <li>• Golden Plover (<i>Pluvialis apricaria</i>) (A140)</li> <li>• Grey Plover (<i>Pluvialis squatarola</i>) (A141)</li> <li>• Lapwing (<i>Vanellus vanellus</i>) (A142)</li> <li>• Knot (<i>Calidris canutus</i>) (A149)</li> <li>• Dunlin (<i>Calidris alpina</i>) (A149)</li> <li>• Blacktailed Godwit (<i>Limosa limosa</i>) (A156)</li> <li>• Bar-tailed Godwit (<i>Limosa lapponica</i>) (A157)</li> <li>• Curlew (<i>Numenius arquata</i>) (A160)</li> <li>• Redshank (<i>Tringa totanus</i>)</li> </ul>		
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	<p>(A162)</p> <ul style="list-style-type: none"> <li>• Greenshank (<i>Tringa nebularia</i>) (A164)</li> <li>• Black-headed Gull (<i>Chroicocephalus ridibundus</i>) (A179)</li> <li>• Wetland and Waterbirds (A999)</li> </ul>		
<p><b>Silvermine Mountains SAC</b> (site code 000939)</p>	<p><b>Priority Annex I Habitats</b></p> <ul style="list-style-type: none"> <li>• Species rich <i>Nardus</i> grasslands on siliceous substrates in mountain areas (and submountain areas, in Continental Europe)* (6230)</li> </ul> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Northern Atlantic Wet Heath with <i>Erica tetralix</i> (4010)</li> </ul>	7.2km	None due to the separation distance and lack of hydrological pathway
<p><b>Silvermines Mountains West SAC</b> (site code 002258)</p>	<p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Northern Atlantic wet heaths with <i>Erica tetralix</i> (4010)</li> <li>• European dry heaths (4030)</li> <li>• Calaminarian grasslands of the <i>Violetalia calaminariae</i> (6130)</li> </ul>	5.7km	None due to the separation distance and lack of hydrological pathway
<p><b>Slieve Bernagh Bog SAC</b> (site</p>	<p><b>Priority Annex I Habitats</b></p> <p>Blanket Bogs (*if active bog)</p>	11.5km	None due to the separation distance and

code 002312)	(7130) <b>Annex I Habitats</b> <ul style="list-style-type: none"><li>Northern Atlantic wet heaths with <i>Erica tetralix</i> (4010)</li><li>European dry heath (4030)</li></ul>		lack of hydrological pathway
<b>Slievefelim to Silvermines Mountains SPA</b> <b>(site code 004165)</b>	• Hen Harrier ( <i>Circus cyaneus</i> ) (A082)	0km	Yes – Potential for significant secondary effect on hen harrier such as reduction and/or loss of foraging habitat due to overlap with the SPA/disturbance and displacement and potential for direct impacts to hen harrier species by additive mortality
<b>Stack’s to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA</b>	• Hen Harrier ( <i>Circus cyaneus</i> ) (A082)	50.9km	None due to the separation distance

(site code 004161)			
<b>Tory Hill SAC</b> (site code 000439)	<p><b>Priority Annex I Habitats</b></p> <ul style="list-style-type: none"> <li>Semi-natural dry grasslands and scublands facies on calcareous substrates (Festuco-Brometalia) (*important orchid sites) (6210)</li> <li>Calcareous fens with Cladium mariscus and species of the Caricion davallinae* (7210)</li> </ul> <p><b>Annex I Habits</b></p> <ul style="list-style-type: none"> <li>Alkaline fens (7230)</li> </ul>	27.3km	None due to the separation distance and lack of hydrological pathway

10.12 Based on my examination of the NIS report and supporting information, the NPWS web site, aerial and satellite imagery, the scale of the proposed development and likely effects, separation distances and functional relationship between the proposed works and the European site, their conservation objectives and taken in conjunction with my assessment of the subject site and the surrounding area, I would conclude that a stage 2 Appropriate Assessment is required for 3 of the 23 European sites referred to above namely:

- **Lower River Shannon SAC (site code 002165)**
- **Lower River Suir SAC (site code 002137)**
- **Slievefelim to Silvermines Mountains SPA (site code 004165)**

10.13 The remaining 20 sites:

- Anglesey Road SAC (site code 002125)

- Askeaton Fen Complex SAC (site code 002279)
- Barrigone SAC (site code 000432)
- Bolingbrook Hill SAC (site code 002124)
- Clare Glen SAC (site code 000930)
- Curraghchase Woods SAC (site code 000174)
- Glenomra Wood SAC (site code 001013)
- Glenstal Wood SAC (site code 001432)
- Keeper Hill SAC (site code 001197)
- Kilduff, Devilsbit Mountain SAC (site code 000934)
- Lough Derg (Shannon) SPA (site code 004058)
- Lough Derg, North East Shore SAC (site code 002241)
- Philipson Marsh SAC (site code 001847)
- Ratty River Cave SAC (site code 002316)
- Silvermine Mountain SAC (site code 000939)
- Silvermine Mountain West SAC (site code 002258)
- Slievebernagh SAC (site code 002312)
- Stack's to Mullaghareirk Mountains, West Limerick Hills and Mount Eagle SPA (site code 004161)
- Tory Hill SAC (site code 000439)
- River Shannon and River Fergus Estuaries SPA (site code 004077)

can be screened out from further assessment because of the scale of the proposed works, the nature of the Conservation Objectives, Qualifying and Special Conservation Interests pertaining to these sites, the separation distances and the lack of a substantive linkage between the proposed works and the European sites. It is, therefore, reasonable to conclude that on the basis of the information on 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 Sites no. (002125, 002279, 000432, 002124, 000930, 000174, 001013, 001432, 001197, 000934, 004058, 002241, 001847, 002316, 000939, 002258, 002312, 004161 and 000439) in view of the sites conservation objectives and a Stage 2 Appropriate assessment is not, therefore, required for these sites.

### Relevant European Sites – Stage 2 Appropriate Assessment

10.14 The Conservation Objectives and Qualifying Interests including any relevant attributes and targets for the relevant three sites are set out below.

<p><b>Lower River Shannon SAC</b> <b>(site code 002165)</b></p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Alluvial Forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)* (91E0)</li> <li>• Coastal Lagoons * (1150)</li> </ul> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Sandbanks which are slightly covered by seawater all the time (1110)</li> <li>• Estuaries (1130)</li> <li>• Mudflats and sand flats not covered by seawater at low tide (1140)</li> <li>• Large shallow inlets and bays (1160)</li> <li>• Reefs (1170)</li> <li>• Perennial vegetation of stony banks (1220)</li> <li>• Vegetated sea cliffs of the Atlantic and Baltic coasts (1230)</li> <li>• <i>Salicornia</i> and other annuals colonising mud and sand (1310)</li> <li>• Atlantic salt meadows (<i>Glauci-Puccinellietalia maritimae</i>) (1130)</li> </ul>
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	<ul style="list-style-type: none"> <li>• Mediterranean salt meadows (<i>Juncetalia maritime</i>) (1410)</li> <li>• Water courses of plain to montane levels with <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation (3260)</li> <li>• <i>Molinia</i> meadows on calcareous, peaty or clayey-silt laden soils (<i>Molinion caeruleae</i>) (6410)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>• Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) (1029)</li> <li>• Atlantic Salmon (<i>Salmo salar</i>) (only in freshwater) (1106)</li> <li>• Sea Lamprey (<i>Petromyzon marinus</i>) (1095)</li> <li>• Brook Lamprey (<i>Lampetra planeri</i>) (1096)</li> <li>• River Lamprey (<i>Lampetra fluviatilis</i>) (1099)</li> <li>• Bottlenose Dolphin (<i>Tursiops truncatus</i>) (1349)</li> <li>• Otter (<i>Lutra lutra</i>) (1355)</li> </ul>
<p><b>Lower River Suir SAC</b> (site code 002137)</p>	<p><b>Priority Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Alluvial Forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)* (91E0)</li> <li>• Yew Woodlands <i>Taxus baccata</i> woods of the British Isles* (91J0)</li> </ul> <p><b>Annex 1 Habitats</b></p> <ul style="list-style-type: none"> <li>• Atlantic salt meadows (<i>Glauci-Puccinellietalia maritimae</i>) (1130)</li> <li>• Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (1410)</li> </ul>

	<ul style="list-style-type: none"> <li>• Water courses of plain to montane levels with <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation (3260)</li> <li>• Hydrophilous tall herb fringe communities of plains and of the montane (6430)</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> of the British Isles (91A0)</li> </ul> <p><b>Annex II Species</b></p> <ul style="list-style-type: none"> <li>• Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) (1029)</li> <li>• White clawed Crayfish (<i>Austropotambious pallipes</i>) (1092)</li> <li>• Sea Lamprey (<i>Petromyon marinus</i>) (1095)</li> <li>• Brook Lamprey (<i>Lampetra planeri</i>) (1096)</li> <li>• River Lamprey (<i>Lampetra fluviatilis</i>) (1099)</li> <li>• Twait Shad (<i>Alosa fallax fallax</i>) (1103)</li> <li>• Otter (<i>Lutra lutra</i>) (1355)</li> <li>• Salmon (<i>Salmo salar</i>) (1106)</li> </ul>
<p><b>Slievefelim to Silvermines Mountains SPA (site code 004165)</b></p>	<ul style="list-style-type: none"> <li>• Hen Harrier (<i>Circus cyaneus</i>) (A082)</li> </ul>

**1. Lower River Shannon SAC (site code 002165)**

**Description of Site**

10.15 This large SAC stretches along the Shannon Valley from Killaloe in Co. Clare to Loop Head/Kerry Head. The site encompasses the Shannon, Feale, Mulkear and Fergus Estuaries, the freshwater stretches of much of the Feale and Mulkear catchments and the marine area between Loop Head and Kerry Head. It also supports a large population of wintering wildfowl and waders and migratory birds. The site is of great ecological interest as it contains a high number of habitats and species listed on Annex I and II of the EU Habitats Directive, including the priority habitats lagoon and alluvial woodland, the only known population of Bottlenose Dolphin and all three Irish Lamprey species. A good number of Red Data Book species are also present. The UWF Grid Connection passes through the boundary of the Lower River Shannon cSAC at three locations, two of which occur in proximity to the Newport (Mulkear) River in the townland of Oakhampton. The third location is at the Bilboa River west of Kilcommon Village. The footprint of the majority of the UWF Grid Connection drains downstream to the Lower River Shannon cSAC.

### **Conservation Objectives**

- To restore the favourable conservation condition of the Freshwater Pearl Mussel, Sea Lamprey, Brook Lamprey, River Lamprey, Otter and Atlantic Salmon in the Lower River Shannon SAC.
- To restore the favourable conservation condition of Mediterranean salt meadows, of Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* in the Lower River Shannon SAC.
- To maintain the favourable conservation condition of sandbanks which are slightly covered by sea water all the time, of estuaries, of mudflats and sandflats not covered by seawater at low tide, of coastal lagoons, of large shallow inlets and bays, of reefs, of perennial vegetation of stony banks, of vegetated sea cliffs, of *Salicornia* and other annuals colonising mud and sand, of Atlantic salt meadows, water courses of plain to montane levels with *Ranunculus fluitans* and Callitriche-Batrachion vegetation, of *Molinia* meadows on calcareous, peaty of clayey-silt laden soils, and Bottlenose Dolphin in the Lower River Shannon SAC.



10.16 For further information regarding attributes and targets refer to Table 5.3 and Appendix 2 of the NIS.

**Potential Direct Effects**

10.17 There are considered no likely direct effects on the SAC.

**Potential Indirect Effects**

10.18 There is potential for indirect impacts arising from the nature of the works, particularly in stream works at river crossings during the construction phase. Surface water run off, sediment entrainment or release, release of fuels/oils/chemicals may result in a decrease in aquatic habitat quality. Indirect impacts may also result to ground water quality and changes in flow regimes as well as from riparian habitat degradation and spread of aquatic invasive species. The conservation interests most likely to be effected by such indirect impacts include Alluvial Forests, Floating river vegetation, Atlantic Salmon, Sea Lamprey, River Lamprey and Brook Lamprey.

10.19 There is potential for indirect effects to the aquatic habitat supporting the Otter during the construction phase from disturbance from works such as drilling and decrease of habitat quality. There is also potential for disturbance to fisheries.

10.20 The NIS sets out that certain conservation interests will not be indirectly impacted by the proposal. Habitats including large shallow inlets and bays, estuaries, mud flats and sandflats, reefs, coastal lagoons, sandbanks, Atlantic salt meadows, Salicornia mudflats and Mediterranean salt meadows all occur west of Limerick City at least 34km downstream from the nearest crossing of the Mulkear River or a tributary thereof. Potential for significant indirect effects are excluded due to the nature of the required works (their scale and extent), distance of separation and the significant dispersal and dilution within the sub catchment introduced as a result. Vegetated sea cliffs and vegetation of stony banks are recorded from the south coast of the Loop Head peninsula and north coast of Kerry. Due to the significant distance from the proposal, effects can be excluded.

10.21 There is also no predicted impacts to Freshwater Pearl Mussel due to the absence of impact pathways and distance of separation. The cited QI is in the Cloon River, Co. Clare which is hydrologically unconnected. All Bottlenose dolphins occur within the coastal waters of the Shannon Estuary west of Limerick. There is no potential

for significant effects due to the absence of impact pathways and the distance of separation. There will be no impact to Molinia meadows habitat due to distance, scale of effects at source and lack of interconnectedness. For further detail regarding the rationale for screening out these aspects refer to Table 4.18 of the NIS.

### **In Combination Effects**

10.22 A description of the in-combination effect of the Whole UWF Project on the Lower River Shannon SAC is set out in table 5.5 – Riparian Habitat Degradation, Table 5.5 Disturbance to Fisheries, Table 5.6: Changes in Flow Regime, Table 5.7 Spread of Aquatic Invasive Species, Table 5.8: Decrease in Habitat Quality, Table 5.9: Disturbance to Otter. Table 5.12, 5.13 and 5.14 set out the in combination effects of other projects/activities identified. I am satisfied that no cumulative impacts arise.

### **Mitigation Measures**

10.23 Detailed Environmental Protection Measures are proposed as part of the UWF Grid Connection design. These are set out in section 5.3.1 of the NIS. A number of Best Practice Measures are also detailed in section 5.3.2 of the NIS. The implementation of the Project Design Measures and Best Practice Measures along with monitoring arrangements and emergency response procedures will be managed under a dedicated UWF Grid Connection Environmental Management Plan. Of particular relevance to the Lower River Shannon SAC are the following mitigation measures:

**PD49:** The route of the 110kV UGC is located along an existing farm track within the SAC boundary. Construction works will be confined to the existing track within the SAC boundary.

**PD50:** There will be no storage of overburden within the Lower River Shannon SAC.

**PD51:** All excavated material will be removed for temporary or permanent storage at a suitable location more than 100m away from the Newport (Mulkear) River, Clare River and Bilboa River.

**PD52:** No instream works are proposed at the Newport (Mulkear) River and Bilboa River crossings (which are located within the SAC) and, therefore, there will be no

placement of cement within the river channels. The 110kV cable will be installed by horizontal directional drilling technique.

**PD53:** All runoff from the construction works associated with the horizontal directional drilling works at the Newport (Mulkear) River and Bilboa River (which is located upstream of the SAC), will be directed into a suitable water treatment drain such as a siltbuster and treated for sediment. This will also mean that in the unlikely event of an oil/fuel spill or leak, any contaminated water can be contained and removed off site.

**PD54:** At the Newport (Mulkear) and Bilboa River crossings, drilling activities will be carried out at least 15m from the Lower River Shannon SAC boundary. Double silt fencing will be set up between the drilling rig and the SAC boundary – the 1<sup>st</sup> silt fence close to the rig and the 2<sup>nd</sup> silt fence close to the SAC boundary. No works or activities will be conducted on the SAC side of these fences. For the Clare River (which is not in an SAC), drilling activities will be carried out at least 15m away from the river bank. Double silt fencing will be set up as before and no works or activities will be conducted on the river side of these fences.

**PD55:** Drilling fluid returns will be contained within a sealed tank/sump and pumped onto a skip for removal off site to an appropriately licenced facility.

**PD56:** The drilling works at the Newport (Mulkear) River and Bilboa River will not be carried out during the months of May, June or July.

**PD57:** There will be no refuelling of vehicles or plant, no storage of fuels and no overnight parking permitted within the boundary of the Lower River Shannon SAC.

**PD58:** There will be no storage of fuels within 100 m of the Newport (Mulkear) River, Clare River or Bilboa River.

## **Assessment**

- 10.24 Section 5.3.5 provides a detailed evaluation of effects on Qualifying Interests and Special Conservation Interests. Tables 5.5 to 5.9 are relevant to the Lower River Shannon SAC (site code 002165).

- 10.25 In terms of the possible damage and degradation to the riparian habitat, it is noted that there is potential for 34 watercourse crossings to be impacted. Having regard to the suite of environmental protection measures proposed, including reinstatement works and replanting which will occur following works, impacts will be short term, temporary and reversible.
- 10.26 Disturbance to fisheries including Atlantic Salmon and the lamprey species from instream works and machinery operation in close proximity to the watercourses will be managed by a range of mitigation measures including ensuring that in stream work are undertaken only during the IFI specified period to avoid sensitive salmonid and spawning periods. Only a limited number of watercourses are subject to instream works and given the limited period anticipated for works, any impacts will be short term.
- 10.27 It is anticipated that there will temporary changes to the flow regime at 9 crossing points. Such temporary alterations will be reversible and subject to seasonal constraints during sensitive aquatic species life changes. At the 6 new permanent crossing points, changes to flow regime will be permanent. However, a range of mitigation measures are proposed to avoid any negative downstream effects on flow regime and reinstatement works will maintain the channel morphology, in line with IFI (2016).
- 10.28 Aquatic invasive species may be introduced to unaffected catchments or spread within infected watercourses during the course of instream works or transported via excavation material by site machinery. The implementation of Best Practice Measures which will be a contractual obligation upon any appointed contractor will minimise potential impacts.
- 10.29 In terms of potential decrease in habitat quality via surface water runoff, sediment entrainment or release, release of fuels oils/chemicals, surface/ground water quality impact, Table 5.8 sets out a detailed description as to the measures that will be undertaken to ensure no adverse effect on the sites integrity. I am satisfied that these will mitigate potential impacts that may arise and that the measures detailed are appropriate to manage any potential indirect effects from contamination by surface water, sediment, release of fuels/oils/chemicals etc.

- 10.30 Otter are a QI of the Lower River Shannon SAC and are a highly sensitive receptor. There is potential for disturbance/displacement of this species, particularly during the construction phase. It is noted in the NIS that there were no active holts within 150 metres of any of the proposed watercourse crossing locations, however, 5 watercourse crossings within the Shannon catchment are identified as potential sources of disturbance to Otter. Table 5.9 states that there is potential for a likely significant effect on the Otter species and that the conservation objectives of the European site may be undermined.
- 10.31 It is detailed that disturbance or displacement effects could result in secondary/synergistic effects from the displacement of individual otters, which may then compete with other individuals possibly resulting in population level effects, reduced distribution (through effective displacement) and hence undermine Conservation Objectives, through either a decline in the extent of terrestrial habitat available within the 10m terrestrial buffer above the High Water Mark and along river banks (through effective displacement), or a reduction in the number of couching sites and holts (again through displacement) or disturbance along commuting routes (barriers to connectivity).
- 10.32 Section 5.3.8 of the NIS sets out a wide range of additional mitigation measures to be introduced in respect of disturbance to Otter. These will include confirmatory surveys for any active Otter holts prior to commencement of construction activity, creation of artificial holts if necessary and implementation of the relevant mitigation measures by a suitably experienced ecologist.
- 10.33 I note from the NPWS conservation objectives for the Lower River Shannon SAC regarding the Otter species that there is an extensive terrestrial habitat for this species within the SAC and that there has been no significant decline in this habitat nor any significant decline in their distribution. It is also noted that there has been no significant decline in couching sites and holts and no increase in barriers to connectivity. The extent of watercourses likely to be impacted on in terms of potential disturbance to the species is limited (5 no.) and current surveys indicate no active holts within proximity to any of the proposed watercourse crossings. Potential impacts during construction phase are likely to be short term and temporary and it is noted from the NIS that disturbance and displacement effects

are likely to be secondary only arising from displacement. No loss of habitat will occur.

10.34 The applicant proposes a suite of measures aimed at reducing potential disturbance and displacement of the Otter species during the construction phase. I am satisfied that such negative displacement effects are unlikely to arise and in this context, the integrity of the SAC in view of its conservation objectives is unlikely to be affected. I note that the applicant proposes post construction monitoring of the Otters which will evaluate the success of the mitigation within the context of the Conservation Objectives of the European Sites under consideration. I consider this however, to be a best practice measure and is not necessary to ensure the efficacy of the mitigation proposed. I am satisfied that the mitigation measures proposed to negate and avoid disturbance/displacement to breeding or foraging Otter during construction are in their own right sufficient to protect the integrity of the site and ensure no adverse impacts to the Otter species.

10.35 In conclusion, I am satisfied that the development would not cause changes to the key indicators of conservation value, including water quality and the Otter species, hence there is no potential for any adverse impacts to occur on either species or the habitats associated with the Shannon SAC (Site Code: 002165). I, therefore, consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European Site No. 002165, or any other European site, in view of the site's Conservation Objectives.

## **2. The Lower River Suir SAC (site code 002137)**

### **Description of the Site**

10.36 This SAC consists of the freshwater stretches of the River Suir immediately south of Thurles, the tidal stretches as far as the confluence with the Barrow/Nore immediately east of Cheekpoint in Co. Waterford and many tributaries. The site is of particular conservation interest for the presence of a number of Annex II animal species including Freshwater Pearl Mussel, White-clawed Crayfish, Salmon Twaite Shad, three species of Lamprey and Otter. It is one of only three known spawning grounds in the country for Twaite Shad. The ornithological importance of the site

adds to its ecological interest. It contains excellent examples of Annex 1 habitats including the priority habitats alluvial forest and Yew woodland. A small area of the footprint of the UWF Grid Connection drains downstream to the Lower River Suir cSAC (the easternmost 1.2km of the 110kV UGC). The route of the underground cable affects the Clodiagh River catchment which feeds into the River Suir and the Lower River Suir SAC.

### **Conservation Objectives**

- To restore the favourable conservation condition of Atlantic salt meadows, of Mediterranean salt meadows, old sessile oak woods with Ilex and Blechnum in the British Isles, of alluvial forests with Alnus glutinosa and Fraxinus excelsior, of Taxus baccata woods of the British Isles, of the Freshwater Pearl Mussel, of Sea Lamprey, Brook Lamprey, River Lamprey, Salmon and Twaité Shad in the Lower River Suir SAC.
- To maintain the favourable conservation condition of water courses of plain to montane levels with the Ranunculus fluitans and Callitriche-Batrachion vegetation, of hydrophilous tall herb fringe communities of plains and of the montane alpine levels, of White-clawed Crayfish and Otter in the Lower River Suir SAC.

10.37 For further information regarding attributes and targets refer to Table 5.4 and Appendix 2 of the NIS.

### **Potential Direct Effects**

10.38 There are considered no likely direct effects on the SAC.

### **Potential Indirect Effects**

10.39 There is potential for indirect impacts arising from the nature of the works, particularly in stream works at river crossings. Surface water run off, sediment entrainment or release, release of fuels/oils/chemicals may result in a decrease in aquatic habitat quality. Indirect impacts may also result to ground water quality and changes in flow regimes well as from riparian habitat degradation and spread of aquatic invasive species. The conservation interests most likely to be effected by such indirect impacts include, Floating river vegetation, Alluvial Forests, Hydrophilous tall herb fringe communities, Old sessile oak woods, Yew woodlands,

Freshwater Pearl Mussel (the nearest known location of Freshwater Pearl Mussel is 17km downstream via hydrological links within the Clodiagh River), White-clawed Crayfish, Sea Lamprey, Brook Lamprey, River Lamprey and Salmon. There are potential indirect effects to the Otter species arising from changes in flow regime, Riparian habitat degradation and decrease in habitat quality.

- 10.40 It is predicted in the NIS that there will be no indirect effects to a number of the QI of the Lower River Suir SAC from certain aspects of the project. These are set out in detail in Table 4.19 of the NIS. Atlantic salt meadows occur south of Waterford city which is greater than 130km via hydrological links. At this distance the dilution will avoid any effects.

### **In Combination Effects**

- 10.41 A description of the in-combination effect of the Whole UWF Project on the Lower River Suir SAC is set out in table 5.10 – Riparian Habitat Degradation, Table 5.11 Disturbance of Aquatic Species, Table 5.12: Changes in Flow Regime, Table 5.13 Spread of Aquatic Invasive Species and Table 5.14: Decrease in Habitat Quality,. Table 5.12, 5.13 and 5.15 set out the in combination effects of other projects/activities identified. I am satisfied that no cumulative impacts arise.

### **Mitigation Measures**

- 10.42 Detailed Environmental Protection Measures are proposed as part of the UWF Grid Connection design. These are set out in section 5.3.1 of the NIS. A number of Best Practice Measures are also detailed in section 5.3.2 of the NIS. The implementation of the Project Design Measures and Best Practice Measures along with monitoring arrangements and emergency response procedures will be managed under a dedicated UWF Grid Connection Environmental Management Plan. Management Plans in respect of surface water quality management, invasive species management and waste management have also been prepared and form for part of the Grid Connection Environmental Management Plan. Refer to Appendix 9 of the NIS.

### **Assessment**



- 10.43 Potential impacts to the Lower River Suir SAC are set out in tables 5.10 to 5.14 of the NIS. The UWF Grid connection works are located at least 12km upstream of the River Suir SAC within the Clodiagh sub catchment. There are only 2 watercourses within the River Suir catchment area and both have no fisheries value as they are drainage channels.
- 10.44 In terms of habitat degradation, reinstatement works will be carried out and any impacts will be short term, temporary and reversible. Potential impacts to Annex II species including Salmon, Lamprey, Crayfish and Freshwater pearl mussel will be limited to downstream influences arising due to water quality effects. Any impacts during construction will be short term and temporary. Mitigation measures will minimise impacts and there will be no adverse effects to qualifying interest aquatic species.
- 10.45 At the two crossing points, changes to the flow regime will be brief to temporary and for the duration of the immediate works. Any temporary alterations to morphology will be reversible and will be subject to seasonal constraints during sensitive aquatic species life changes.
- 10.46 As with the Shannon SAC, control of invasive species will be managed through the implementation of best practice measures. Potential impacts to habitat quality from surface water run off, sediment entrainment or release, release of fuels/oils/chemicals etc. will be mitigated by the implementation of a full range of measures which will be delivered as a contractual obligation for the contractor on site.
- 10.47 In conclusion, I am satisfied that the development would not cause changes to the key indicators of conservation value, including water quality, hence there is no potential for any adverse impacts to occur on either species or the habitats associated with the Lower River Suir SAC (Site Code: 002137). I, therefore, consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European Site No. 002137, or any other European site, in view of the site's Conservation Objectives.

### **3. Slievefelim to Silvermines Mountains SPA (004165)**

### **Description of Site**

10.48 This SPA is an upland site located Counties Tipperary and Limerick. It includes the peaks of Keeper Hill, Slievefelim, Knockstanna, Knockappul, Mother Mountain, Knockteige, Cooneen Hill and Silvermine Mountain. Several important rivers rise within the site, including the Mulkear, Bilboa and Clare. The site consists of a variety of upland habitats, though approximately half is afforested. The Slievefelim to Silvermines Mountains SPA is of ornithological importance because it provides nesting and foraging habitat for breeding Hen Harrier. The site is one of the strongholds for Hen Harrier in the country. The mix of forestry and open areas provides optimum habitat conditions for this rare bird. Hen Harriers will forage up to c. 5km from the nest site, utilising open bog and moorland, young conifer plantations and hill farmland. Birds will often forage in openings and gaps within forests. The Annex I species Merlin and Peregrine have also been recorded on the site. The UWF Grid Connection traverses the Slievefelim to Silvermines Mountains SPA from the townland of Newross, east of Newport to the townland of Knocknabansha near Upperchurch village and will require works within the SPA.

### **Conservation Objectives**

- To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interest for this SPA (Hen Harrier).

10.49 For further information regarding attributes and targets refer to Table 5.2 and Appendix 2 of the NIS.

### **Potential Direct Effects**

10.50 There is potential for direct effects to the Hen Harrier from inadvertent mortality of the species at nest or roost sites. It is detailed in the NIS that it is not anticipated that there will be any additive mortality due to improved access to previously inaccessible locations by humans during operations as there will be no increase in accessibility. All improved/new roads will have gates which will be locked. There is no collision risk.

### **Potential Indirect Effects**

10.51 There is potential for indirect effects on the Hen Harrier due to the reduction and/or loss of foraging habitat within and outside the SPA and from disturbance/displacement of nesting/roosting Hen Harrier from noise and human activity during the construction and operational phase. There may also be in combination effects with other developments and activities.

### **In combination Effects**

10.52 A description of the in-combination effect of the Whole UWF Project on the Slievefelim to Silvermines Mountains SPA is set out in table 5.10: Reduction on or loss of suitable or potentially suitable hen harrier foraging habitat (alone), table 5.22: Inadvertent mortality of hen harrier in or at nest roost sites and table 5.23: disturbance/displacement of nesting/roosting Hen Harrier. Table 5.12, 5.13 and 5.15 set out the in combination effects of other projects/activities identified. Table 5.17 and 5.18 set out the in combination effects of reduction in or loss of suitable or potentially suitable hen harrier foraging habitat, inadvertent mortality of hen harrier on or at nest or roost sites and disturbance /displacement of nesting/roosting hen harrier.

### **Mitigation Measures**

10.53 Detailed Environmental Protection Measures are proposed as part of the UWF Grid Connection design. These are set out in section 5.3.1 of the NIS. A number of Best Practice Measures are also detailed in section 5.3.2 of the NIS. The implementation of the Project Design Measures and Best Practice Measures along with monitoring arrangements and emergency response procedures will be managed under a dedicated UWF Grid Connection Environmental Management Plan. Management Plans in respect of surface water quality management, invasive species management and waste management have also been prepared and form part of the Grid Connection Environmental Management Plan. Refer to Appendix 9 of the NIS. Of particular relevance to the Slievefelim to Silvermine Mountains SPA are the following mitigation measures:

**PD62:** All new permanent access roads within the SPA will be concealed access roads which will be created immediately following construction works by covering the hardcore surface of the new road with a vegetated layer. The concealed access road will provide a load bearing surface for occasional maintenance vehicles.

Within the SPA, the establishment of the concealed access roads will be overseen by a competent peatland ecologist and Hen Harrier expert. A detailed statement regarding vegetation reinstatement methodology along concealed access roads is set out in Appendix 18 of the NIS.

**PD63:** All temporary storage berm locations will be reinstated to the biodiversity value of the underlying habitat. Permanent berms will be immediately reseeded with native heather and upland grass species. Harvester crossing points will be covered with topsoil and reseeded immediately as will any other temporary land use change locations. Within the SPA, this reinstatement will be overseen by a competent peatland ecologist and a Hen Harrier expert. Outside the SPA this reinstatement will be overseen by the Project Ecologist.

**PD64:** Annual visual inspections of the lands over the 110kV UGC and the testing/inspection/planned maintenance at joint bays, will be scheduled outside of the Hen Harrier breeding season, on those parts of the 110kV UGC which occurs within the boundary of the Slievefelim to Silvermines Mountains SPA.

### **Assessment**

- 10.54 The special conservation interest of this site relates specifically to the Hen Harrier. Potential impacts on this species are set out in table 5.10, 5.22 and 5.23 of the NIS.
- 10.55 There is potential for indirect impacts to this highly sensitive receptor of international importance from the reduction or loss of foraging habitat. Permanent loss of foraging habitat through land take or land use change may result in the permanent exclusion of birds from potentially viable habitat which forms the constitutive characteristic of the SPA. This may result in long term knock on effects on breeding success of birds within the SPA, through the reduced availability of foraging resources.
- 10.56 It is detailed in the NIS that impacts within the SPA will be mitigated by the provision of concealed access roads which will be planted with mature heathers and grasses. Permanent berms will be immediately planted with heather and grass. Temporary berms, once removed, will be reinstated to their previous ground condition at that location. Temporary land use changes from other works including cable trenching/laying, temporary access roads etc. will also be reinstated.

- 10.57 It is stated in the NIS that the total permanent land use change (excluding habitat classified as buildings and artificial surfaces excluded as it is unsuitable foraging habitat) amounts to 1.98ha. Of this:
- 0.696 ha will be concealed roads.
  - 0.434ha will be permanent berms immediately reinstated with heathers and grasses.
  - 0.030 ha will be harvester crossings on the concealed access roads which will be immediately reinstated with heathers and grasses.
  - 0.825 ha of felling/land use change corresponds to forestry felling at Castlewaller but also smaller amounts at varying locations along the grid route such as the margins of forestry roads. All will be immediately reinstated.
- 10.58 As the extent of land effected by the permanent change constitutes less than 2 ha, it is stated that impacts will be short term and temporary until reinstatement planting becomes established. However, whilst the short term nature of the reinstatement works is noted, regard must also be had to the high sensitivity and importance of this area for the Hen Harrier species.
- 10.59 There is no detailed information submitted with the NIS regarding the extent of time it will take for the reinstatement planting to become fully established, although it is indicated in Appendix 18 of the NIS that it will take at least 18 months to allow bedding in and establishment of the vegetation on the geocell road surfaces. It is stated that planting of the geocell with mature plantlets along with a suitable grass species will take place prior to construction at a preparation nursery site to avoid any time delay in the provision of habitat at source. Notwithstanding this, there will still inevitably be a loss of habitat during the construction phase and until reinstatement planting becomes fully established at concealed road locations and elsewhere along the grid connection route where habitat is removed and replaced. I am not satisfied that it has been adequately demonstrated or assessed that this short term loss of foraging habitat will not adversely affect the Conservation Objectives of the SPA.
- 10.60 I also have concerns regarding the principle of concealed roads (which comprise the covering of standard stone access roads with a vegetated layer of heather and

grasses) and their efficacy as a mitigation measure to address the permanent loss of habitat within the SPA. It is stated in the NIS that it is proposed to use concealed access roads in order to ensure no loss of vegetation cover associated with the UWF Grid Connection within the SPA; ensure access to the joint bay locations during the operation of the grid connection by ESNB and to continue to provide a suitable vegetation cover in relation to the Hen Harrier bird. There are 10 individual sections of concealed access roads proposed within the Slievefelim to Silvermine Mountains SPA (see table 1, Appendix 19 of NIS Volume 1 for further detail).

10.61 Section 5.3.9.3 of the NIS addresses the efficacy in respect of the use of the concealed access road by Hen Harrier and Appendix 18 sets out the vegetation reinstatement methodology along concealed access roads. It is detailed that an on-site monitoring protocol will be required for the first 18 months to ensure that the growth is sufficient to effectively provide Hen Harrier habitat. It is further outlined that published literature is clear regarding the positive selection of heather and grassland by foraging hen harrier. However, given the length of time it will take for this planting to be established and the extent of monitoring required to ensure growth is sufficient, it is uncertain in my view, as to whether this measure will effectively mitigate the permanent loss of sensitive habitat. There are no proven examples of where such measures have been used elsewhere with effect in a Natura 2000 site and the examples cited in the NIS refer to heather re-establishment on mechanically disturbed areas and a cutover forestry site (see appendix 19 NIS) rather than use of concealed access roads.

10.62 In considering the appropriateness of the proposed concealed roads to negate negative impacts on the SPA as a result of habitat loss, regard must also be had to the opinion of the Advocate General on the *Grace and Sweetman v An Bord Pleanála* case (C-164/17). The opinion states that where a project is being carried out on a site designated for the protection and conservation of certain species and the temporary or permanent effect of the project be such that it will no longer be able to provide suitable habitat for the species in question, the fact that the project includes measures to ensure that, after an appropriate assessment of the implications of the project has been carried out and throughout the lifetime of the project, the part of the site that is in fact likely to provide a suitable habitat will not be reduced and indeed may be enhanced may not be taken into account for the

purpose of the assessment that must be carried out in accordance with Article 6 (3) of the directive.

- 10.63 It is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm, guaranteeing beyond all reasonable doubt that the project will not adversely affect the integrity of the area, that such a measure may be taken onto consideration when appropriate assessment is carried out. As a general rule, any positive effects of the future creation of new habitat, which is aimed at compensating for the loss of an area and quality of that habitat in a protected area, are highly difficult to forecast with any degree of certainty or will be visible only in the future.
- 10.64 The inclusion in the assessment of the implications of future benefits to be derived from the adoption of measures which, at the time that assessment is made, are only potential, as the measures have not yet been implemented means that it is not possible for those benefits to be foreseen with the requisite degree of certainty. This holds in the subject case, that the inclusion in the assessment of the implications of future benefits to be derived from the adoption of measures such as concealed access roads, which are potential measures, as they have not been implemented, cannot be considered under Article 6(3). In this context, I am not satisfied, that the proposed development will not have an adverse effect on the integrity of the European site in view of its conservation objectives.
- 10.65 In considering loss of foraging habitat, regard must also be had to the permanent loss of suitable foraging habitat outside of the SPA. As detailed in section 9 above, it is detailed in the EIAR that there will be a permanent loss of 3ha of suitable foraging habitat for the Hen Harrier species outside the SPA. It is identified that this loss of habitat occurs within 2km of the proposed grid connection route. A radius of 2km from the grid connection has been identified as the potential zone of influence for the Hen Harrier species. The EIAR states that the loss of foraging habit at key periods of the breeding cycle can have knock on effects on breeding success of identified pairs nesting nearby, in particular where it occurs within 2km of a nest location. The surveys undertaken have identified a number of nests within the 2km zone, all within the SPA. The EIAR states that the significance of the impact of this permanent loss of habitat outside the SPA is moderate negative.

- 10.66 The NIS submitted does not address the permanent loss of habitat outside the SPA. Only the reduction in or loss of suitable or potentially suitable Hen Harrier Foraging Habitat within the Slievefelim to Silvermines Mountains SPA is evaluated in table 5.10. The lack of such an assessment regarding potential ex situ impacts, is in my view, a significant omission from the NIS. In the absence of such information and assessment, it is not possible to fully assess the potential impacts of the development on the Conservation Objectives of the SPA and in this regard, it is not possible to complete a full Appropriate Assessment as to whether the development will adversely affect the integrity of the European site.
- 10.67 There is also potential to cause inadvertent mortality of the Hen Harrier in or at nest or roost sites. A number of mitigation measures are set out to preclude such impacts. Confirmatory Hen Harrier breeding surveys will be completed prior to commencement of construction activity to ensure nesting activity and active nests are recorded within 2 km of the construction works boundary. No works will be undertaken within 500 metres of active Hen Harrier breeding attempts or active nesting activity during the breeding season and hours of construction will be restricted within 1,000m of a roost during roosting season. I am satisfied that these measures, coupled with the other mitigation measures set out in the NIS, will ensure no inadvertent mortality.
- 10.68 Impacts to the Hen Harrier can also occur during the construction phase from disturbance by noise and visual intrusion. The effects of disturbance in respect to Hen Harrier which may be present during the breeding season may be nest desertion, reduced incubation periods or additional stress on adult birds due to their propensity to alarm at intruders. Disturbance to roosting Hen Harrier in the winter months may have impacts on survival rates. The NIS sets out a range of mitigation measures controlling construction works to ensure no disturbance/displacement impacts occur.
- 10.69 In conclusion, I am not satisfied that the NIS has adequately assessed the implications of the short term and temporary loss of suitable or potentially suitable Hen Harrier Foraging Habitat within the SPA during the construction phase. Furthermore, in light of the opinion of the Advocate General on the Grace and Sweetman v An Bord Pleanála case (C-164/17), it is my view that the efficacy of measures proposed to mitigate potential permanent loss of suitable or potentially



suitable Hen Harrier Foraging Habitat within the SPA, including the use of concealed access roads has not been proven. This is because the future benefits to be derived from the adoption of such measures, which at the time my assessment is made, are only potential, and the measures have not yet been implemented, I cannot be sufficiently certain that these measures will make an effective contribution to avoiding harm and guarantee beyond all reasonable doubt, that the project will not adversely affect the integrity of the SPA. I also note that there is no evidence to demonstrate that concealed access roads have been previously used with effect within a Natura 2000 site. The NIS is also inadequate as the potential ex situ impacts of the permanent loss of foraging habitat outside the SPA is not fully assessed.

10.70 On the basis of the information provided with the application, including the Natura Impact Statement, and in light of the assessment carried out above, I am not satisfied that the proposed development individually, or in combination with other plans or projects would not adversely affect the integrity of European site no. 004165 Slievefelim to Silvermines Mountains SPA, in view of the site's Conservation Objectives. In such circumstances the Board is precluded from granting approval.

### **In Combination Effects**

10.71 The NIS includes a detailed assessment of the potential in combination effects of all elements of the Whole UWF project. Section 5.3.6 also evaluates the in combination effects of other plans and projects. It is concluded that there will be no adverse effects on the integrity of any of the Natura 2000 sites.

10.72 A number of observers raised concerns regarding the potential cumulative effects of the proposed development in the context of the permitted wind farm development. When carrying out an Appropriate Assessment, the competent authority must have regard to potential in combination effects including extant permissions not yet started. As detailed previously, a full appropriate assessment of the Upperchurch Windfarm development has already been undertaken by the Board. I do not, therefore, intend to carry out an assessment of the efficacy of the mitigation measures already assessed and deemed appropriate by the Board under this decision. I am satisfied that under the parent permission, the development did

not result in the loss of habitat within the SPA. In this context, the proposal for the Hen Harrier Management Plan constitutes an appropriate mitigation measure. It is evident that under the parent permission that there were no adverse impacts to the SPA. Notwithstanding my concerns regarding the impact (alone) of the current proposal on the SPA, I am satisfied that no cumulative impacts arise.

### **Appropriate Assessment Conclusion**

- 10.73 I consider it reasonable to conclude on the basis of the information on the file, which I consider adequate in order to carry out a Stage 2 Appropriate Assessment, that the proposed development, individually or in combination with other plans or projects would not adversely affect the integrity of the European Site No. 002165 and European Site no. 002137.
- 10.74 On the basis of the information provided with the application, including the Natura Impact Statement, and in light of the assessment carried out above, I am not satisfied that the proposed development individually, or in combination with other plans or projects would not adversely affect the integrity of European site no. 004165 Slievefelim to Silvermines Mountains SPA, in view of the site's Conservation Objectives. In such circumstances the Board is precluded from granting approval.

## 11.0 Recommendation

11.1 On the basis of the above assessment, I recommend that the Board **REFUSE** the proposed development for the reasons and consideration set out below.

## 12.0 Reasons and Considerations

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

- (a) EU legislation including in particular Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directive) which set the requirements for conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union.
  - The relevant provisions of EU Directive 2014/52/EU amending Directive 2011/92/EU (EIA Directive) on the assessment of the effects of certain public and private projects on the environment.
  - EU Renewable Energy Directive 2009/28/EC which aims to promote the use of renewable energy.
- (b) National Legislation including in particular:

Section 182A of the Planning and Development Act 2000 (as amended) which sets out the provisions in relation to electricity transmission lines.
- (c) National Policy including in particular:
  - The National Planning Framework (NPF), 2018.
  - Government Policy Statement on the Strategic Importance of Transmission and Other Energy Infrastructure, July 2012.
- (d) Regional Policy including in particular:
  - Regional Planning Guidelines for the Mid West 2010-2016.
- (e) Local Planning Policy including in particular:
  - The provisions of the North Tipperary County Development Plan 2010-2016.
- (f) The following matters:
  - The likely consequences for the environment and the proper planning and

sustainable development of the area in which is it proposed to carry out the proposed development and the likely significant effects of the proposed development on European Sites.

- The conservation objectives, qualifying interests and special conservation interests of the Lower River Shannon SAC (site code 002165), Lower River Suir SAC (site code 002137) and Slievefelim to Silvermines SPA Mountains (site code 004165).
- The documentation and submissions of the applicant, including the environmental impact assessment report and associated documentation submitted with the application, and the range of mitigation and monitoring measures proposed.
- The submissions and observations made to An Bord Pleanála in connection with the application and the submission from the Local Authority.
- The nature and extent of the proposed development as set out in the application for approval.
- The report and recommendation of the inspector including the examination, analysis and evaluation undertaken in relation to appropriate assessment screening and environmental impact assessment.

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

12.2.1 It is considered that the proposed development would accord with European, national, regional and local planning policy and is generally in accordance with the strategic policy in relation to provision of such infrastructure.

## **12.3 Environmental Impact Assessment**

12.3.1 The Board complete an environmental impact assessment of the proposed development, taking into account:

- (a) the nature, scale, location and extent of the proposed development,
- (b) the environmental impact assessment report and associated documentation submitted in support of the application,
- (c) the submission from the local authority, the observers and the prescribed bodies in the course of the application, and

(d) the Inspector's report.

12.3.2 The Board considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, provided information which was 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. The Board is satisfied that the reasoned conclusion is up to date at the time of taking the decision. The Board however, is not satisfied that the information contained in the EIAR complies with the provisions of EU Directive 2014/52/EU amending Directive 2011/92/EU or Section 172 of the Planning and Development Act (as amended) with regard to providing an adequate or robust description of the reasonable alternatives studied, which are relevant to the proposed project and its specific characteristics.

12.3.3 The Board agreed with the summary and 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 submissions made in the course of the application. The Board is satisfied the Inspector's report sets out how these were addressed in the examination and recommendation and are incorporated into the Boards decision.

#### 12.4 Reasoned Conclusion on the Significant Effects

12.4.1 Having regard to the examination of environmental information contained above, to the EIAR and the submissions from the observers and prescribed bodies, it is considered that the main significant direct and indirect effects of the proposed development in the environment are as follows:

**Biodiversity:** Impacts to aquatic habitats and species are likely to arise during the construction phase particularly in terms of decrease to water quality, changes in flow in watercourses, disturbance/displacement of fish, riparian habitat degradation and spread of aquatic invasive species. These impacts would be mitigated against by implementing a range of Project Design Environmental Measures set out in Table 8.40 of the EIAR. These include measures to prevent contamination of water and prevent sedimentation release to water.

Impacts to badgers may arise from disturbance and displacement during the construction phase. Measures including the preclusion of construction works in the

main breeding season within 50 metres of an active badger sett and no construction activity outside of daylight hours will mitigate this impact.

Impacts to bats could occur from destruction or disturbance of bat roosts in trees, severance of commuting routes or feeding areas and disturbance or displacement due to lighting. Significant effects can be mitigated by measures detailed in Table 8.73 of the EIAR.

Impacts to hen harrier will arise from a reduction in or loss of suitable foraging habitat. There will be a net permanent loss of 3.14ha in the wider study area. The significance of this impact is considered to be moderate (negative). The Board is not satisfied that adequate mitigation measures have been set out in the EIAR to address this issue and that adverse impacts will not occur. The efficacy of measures such as concealed roads within the SPA to mitigate against habitat loss may also be inadequate and, therefore, it cannot be ruled out beyond all scientific doubt that no adverse impacts to the integrity of the SPA will occur.

There is potential for significant negative effects to otters. Mitigation measures will be put in place during construction works including surveys by an experienced otter surveyor, communication of the survey results to the construction team, NPWS and the relevant authorities, control of works within 150m of holts including implementation of appropriate measures such as screening, restriction of working hours, restriction on scale of construction works and the provision of artificial holts if required. The implementation of measures will be supervised by a competent ecologist. Monitoring will take place three years after the completion of construction. The residual impact will be slight.

**Soil:** Impacts to soil could result from excavation and relocation of soils, subsoils and bedrock, compaction, erosion and contamination. Mitigation measures are detailed in Tables 10.17, 10.24 and 10.31 of EIAR. These include measures to prevent peat slippage; to reduce erosion to soils by ensuring that all excavations will be reinstated and landscape immediately after the works and permanent storage berms of soils will be graded and seeded immediately; to prevent compaction, construction traffic will be restricted to the footprint of the works only area and tracking across adjacent ground will not be permitted; and to prevent contamination, all fuels required for construction activities will be stored in banded,

locked storage containers in a designated location and no refuelling, storage of fuel or overnight parking will be permitted within the designated sites.

**Water:** Potential indirect effects could be caused by construction activities such as sediment laden run off to rivers, streams and drains and surface water quality impacts during conifer plantation tree felling, earthwork excavations, dewatering of excavations, crossing works and directional drilling. Water quality can also be impacted by contaminated fuels, oils, chemical spills and cement run off as well as run off from permanent hardstanding areas and access roads. The morphology of watercourses themselves may be impacted by changes to the shape of the channel due to instream works. Groundwater bodies including local wells and springs can be contaminated by spillage of fuels, oils, cement, dewatering etc. The Bleanbeg NHA and local water dependent habitats may be impacted by changes in drainage regimes. Detailed mitigation measures are set out in tables 11.20, 11.27, 11.36, 11.43, 11.50, 11.57 and 11.64 to prevent adverse impacts including sedimentation effects, to prevent contamination of surface water and groundwater and prevent increased flood risk. These will mitigate any significant effect. There will be slight to moderate impacts to the morphology of watercourses due to instream works. The magnitude of this impact however, is likely to be small due to the relatively minor nature of the watercourses being crossed (most are drains and are of low ecological importance) and the distributed nature of the works within several water bodies over a large geographical area.

**Air:** Impacts arising from noise and vibration levels and increases in airborne dust will be mitigated through appropriate construction management measures, limits to hours of construction activity and implementation of an Environmental Management Plan.

**Material Assets Roads:** Impacts during the construction phase include damage to the local road network and increases in traffic volumes particularly HGV's with potential for disruption to residents. In order to prevent or reduce such negative effects, mitigation measures will be implemented including the repair, resurfacing and reinstatement of road surfaces after the construction phase; the implementation of a Traffic Management Plan to control and minimise the traffic impacts of the construction stage and the appointment of a Community Liaison Officer to liaise with the local community on upcoming schedules.

**Cultural Heritage:** Impacts on Cultural Heritage during the construction stage would be mitigated by ensuring archaeological monitoring of all initial ground works during the construction stage with provision made for the resolution of any archaeological features or deposits that may be identified. Impacts on as yet unknown underwater archaeology would be mitigated by the carrying out of an underwater archaeological impact assessment in consultation with the DCHG including provision for resolution of any archaeological finds, if necessary.

**Alternatives:** The development may have an adverse impact on biodiversity. This is as a result of the route selected for the grid connection, which runs in part through an SPA. The Board is not satisfied, based on the assessment and analysis set out in the EIAR, that in the consideration of potential route options, that adequate weight has been given to biodiversity matters. Lesser damaging alternatives are available that could avoid negative impacts on the environment with regard to biodiversity.

12.4.2 The Board completed an environmental impact assessment in relation to the proposed development. The EIAR has considered that the main direct and indirect effects of the proposed development on the environment would be primarily mitigated by environmental management measures. The Board is not satisfied however, that following mitigation, no significant residual negative impacts on the environment would remain as a result of the proposed scheme with respect to biodiversity and the Hen Harrier species. The proposed development may, therefore, have an unacceptable indirect effect on the environment.

12.4.3 Furthermore, having regard to the potential route options presented in the EIAR, it is considered that the selected route option will result in a significant intervention in the natural environment and adverse impacts to biodiversity. The Board is not satisfied that sufficient consideration has been provided regarding potential alternatives including the routing of the cable in the local road network or consideration of alternative grid connection technologies such as overhead line alternatives. Furthermore, no information has been provided in relation to alternative connection locations where the windfarm could potentially connect to the national electricity grid.



## 12.5 **Appropriate Assessment**

12.5.1 The Board agreed with the screening assessment and adopted the conclusion carried out in the Inspector's report that the Lower River Shannon SAC (site code 002165), Lower River Suir SAC (site code 002137) and Slievefelim to Silvermines Mountains SPA (site code 004165) are the only European sites in respect of which the proposed development has a significant effect.

12.5.2 The Board considered the Natura Impact Statement and associated documentation submitted with the application for approval, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Board completed an appropriate assessment of the implications of the proposed development for the affected European sites, namely the Lower River Shannon SAC (002165), Lower River Suir SAC (002137) and Slievefelim to Silvermines Mountains SPA (004165) in view of the site's conservation objectives. In completing the appropriate assessment, the Board considered, in particular, the following:

- The likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects.
- The mitigation measures which are included as part of the current proposal, and
- The conservation objectives for the European sites.

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

Having regard to the scale and nature of the development and in particular the proposal to develop an underground cable through part of the Slievefelim to Silvermines Mountains Special Protection Area (Site Code 004165), the Board is not satisfied that the proposed development would not lead to adverse indirect effects on the special conservation interest of this European site, that is, the Hen Harrier, and that, notwithstanding the mitigation measures proposed by the applicant, there remains reasonable scientific doubt that there would be no such adverse effects. It is, therefore, considered that the Board cannot be satisfied that

the proposed development individually, or in combination with other plans or projects would not adversely affect the integrity of this European site in view of the site's Conservation Objectives. In such circumstances the Board is precluded from granting approval/permission and the proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

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**Erika Casey**

**Senior Planning Inspector**

**27th November 2018**