



CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE &
PLANNING

ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR) FOR THE PROPOSED FAHY BEG WIND FARM, CO. CLARE

VOLUME 2 – MAIN EIAR

CHAPTER 1 - INTRODUCTION

Prepared for: RWE Renewables Ireland Ltd.

RWE

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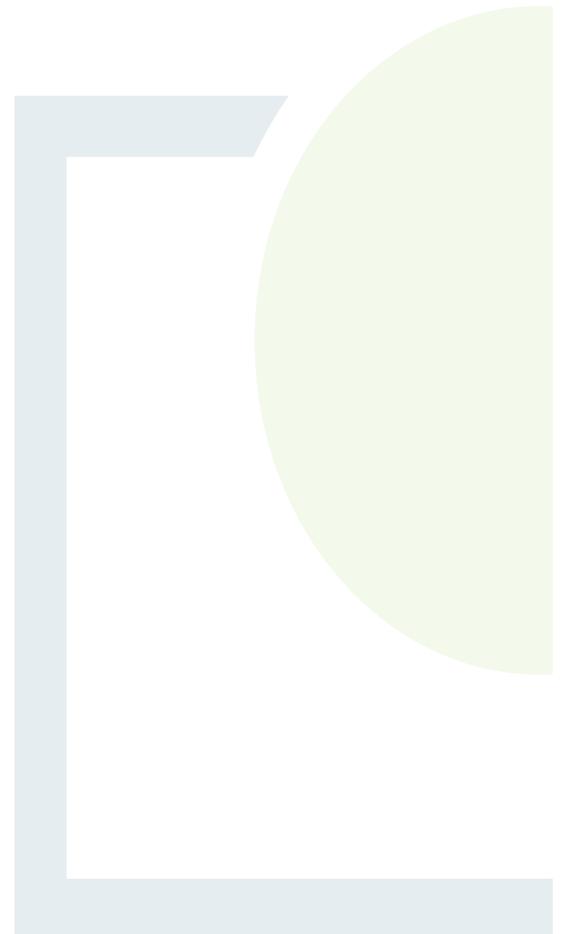


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Clare Planning Authority - Inspection Purposes Only!



1. INTRODUCTION

Fehily Timoney & Company (FT) has prepared this environmental impact assessment report (EIAR) on behalf of RWE Renewables Ireland Limited. RWE Renewables Ireland Limited intends to apply to Clare County Council for planning permission to construct the proposed Fahy Beg Wind Farm, situated near Bridgetown and O'Briensbridge in County Clare. The location of the proposed Fahy Beg Wind Farm development is shown on Figure 1-1. A full description of the proposed project is included in Chapter 3 of this EIAR.

The proposed Fahy Beg Wind Farm turbines are located on the southern face of Lackareagh Mountain, the southernmost extension of the Slieve Bearnagh Mountains. The site is dominated by areas of Farmland and Forestry. The proposed wind farm site includes lands in the townlands of Fahy Beg, Fahy More North, Ballymoloney, Ballyknavin (Ed O'Briensbridge), Ballyquin More, Woodpark and Leitrim. The proposed grid connection crosses the townlands of Leitrim, Fahy More South, Ballybrack, Aharinaghmore, Tooreen (Ed Cloghera), Aharinaghbeg, Knockdonagh, Roo East, Blackwater, Rosmadda West, Parkroe, Lackyle (Ed. Ballyglass) and Castlebank. The GCR is illustrated in Figure 3-4 of Chapter 3.

The proposed development will comprise 8 no. wind turbines with a blade tip height range from 169 m to 176.5 m, a hub height range from 102.5 m to 110 m and a rotor diameter range from 131 m to 138 m; foundations and hardstanding areas, new access tracks, 1 no. substation including control buildings, underground electrical and communications cabling, drainage, temporary site compound and associated works. The proposed development will have an estimated Export Capacity (MEC) ranging from 31.2 – 38.4 MW. Further details on the proposed development including the turbine delivery route and grid connection route are provided in Chapter 3 of this EIAR. A site layout is presented in Figure 3-2.

The turbine delivery route (TDR) from the port into which the components are shipped, to the wind farm site will use the national primary route network as much as possible. It is proposed to deliver turbines to the site from Foynes, Co. Limerick via the N69 travelling east for c.34 km then joining the eastbound N18 at Junction 2, Limerick and continuing east for c. 4 km onto the M7. It will continue along the M7 for c.21 km before departing the M7 at Junction 27 and continuing north on the R494 towards Killaloe for ca. 7km. It then turns left onto the proposed bypass and utilises the new Shannon River crossing before turning left onto the R463 travelling southbound then continue south on the R463 for c. 8km before turning right onto the R466. and following the R466 to the entrance of the site. Loads will continue north on the R466 to the proposed site entrance. The TDR and locations of associated accommodation works required for the delivery of turbine components are detailed in Chapter 13.

A Biodiversity Enhancement and Management Plan (BEMP) has been prepared to describe a set of land management prescriptions as part of proposed Fahy Beg Wind Farm Development. The measures set out in the BEMP include those designed to protect and enhance existing habitats. Higher value habitats will be actively managed to maintain and improve their value and lower value habitats will see specific interventions designed to improve their attractiveness for a range of species. Further details of BEMP measures are outlined in Chapter 3 and Appendix 3.4.

1.1 Applicant

The application for the proposed wind farm is being made by RWE Renewables Ireland Limited



1.2 Outline of the Proposed Development

The proposed project consists of three main elements:

- Fahy Beg Wind Farm;
- Turbine delivery route (TDR);
- Grid connection route (GCR).

The proposed Fahy Beg Wind Farm will consist of 8 turbines with a tip height range from 169 m to 176.5m, turbine foundations and hardstanding areas, new access tracks, 1 no. substation including control buildings, underground electrical and communications cabling, drainage, temporary site compound and associated works.

The proposed development will have an estimated Export Capacity (MEC) ranging from 31.2 – 38.4 MW. The exact MEC will be dependent on the output power of the turbine model available at procurement stage which may be subject to technological advancements. The proposed turbines will have the following specifications:

- Three bladed, horizontal axis type turbine;
- Tip height ranging from 169m to 176.5m;
- Rotor diameter ranging from 131m to 138m;
- Hub height ranging from 102.5 to 110m

While it is proposed to apply for the above-mentioned limited range of turbine dimensions, if the Council is of a mind to permit the development based on fixed dimensions only for the turbines, we request that the following five fixed dimensions for turbines are consented:

- Tip height of 171.5m, hub height of 106m, blade length of 65.5m;
- Tip height of 169m, hub height of 102.5m, blade length of 66.5m;
- Tip height of 176.5m hub height of 110m, blade length of 66.5m;
- Tip height of 173m hub height of 105m, blade length of 68m;
- Tip height of 176.5m hub height of 107.5m, blade length of 69m.

The EIAR assesses the potential environmental effects of the full range and consequently the options listed above.

The wind farm has a defined planning boundary which includes not only the turbines themselves but also the ancillary infrastructure listed above. The electricity generated by the proposed wind farm will be transmitted by a collector system of underground cables to the proposed on-site substation. The proposed development will also comprise underground cables from the wind farm to the National Grid connection point as well as improvements to the public road network for the delivery of turbine components.

It is proposed that the development will connect to the existing 110kV substation at Ardnacrusha via underground cable. The proposed grid connection route will follow the route of the existing public road between the proposed wind farm site and the 110kV substation at Ardnacrusha. The proposed grid connection will pass through the townlands of Leitrim, Ballybrack, Fahy More South, Aharinaghmore,

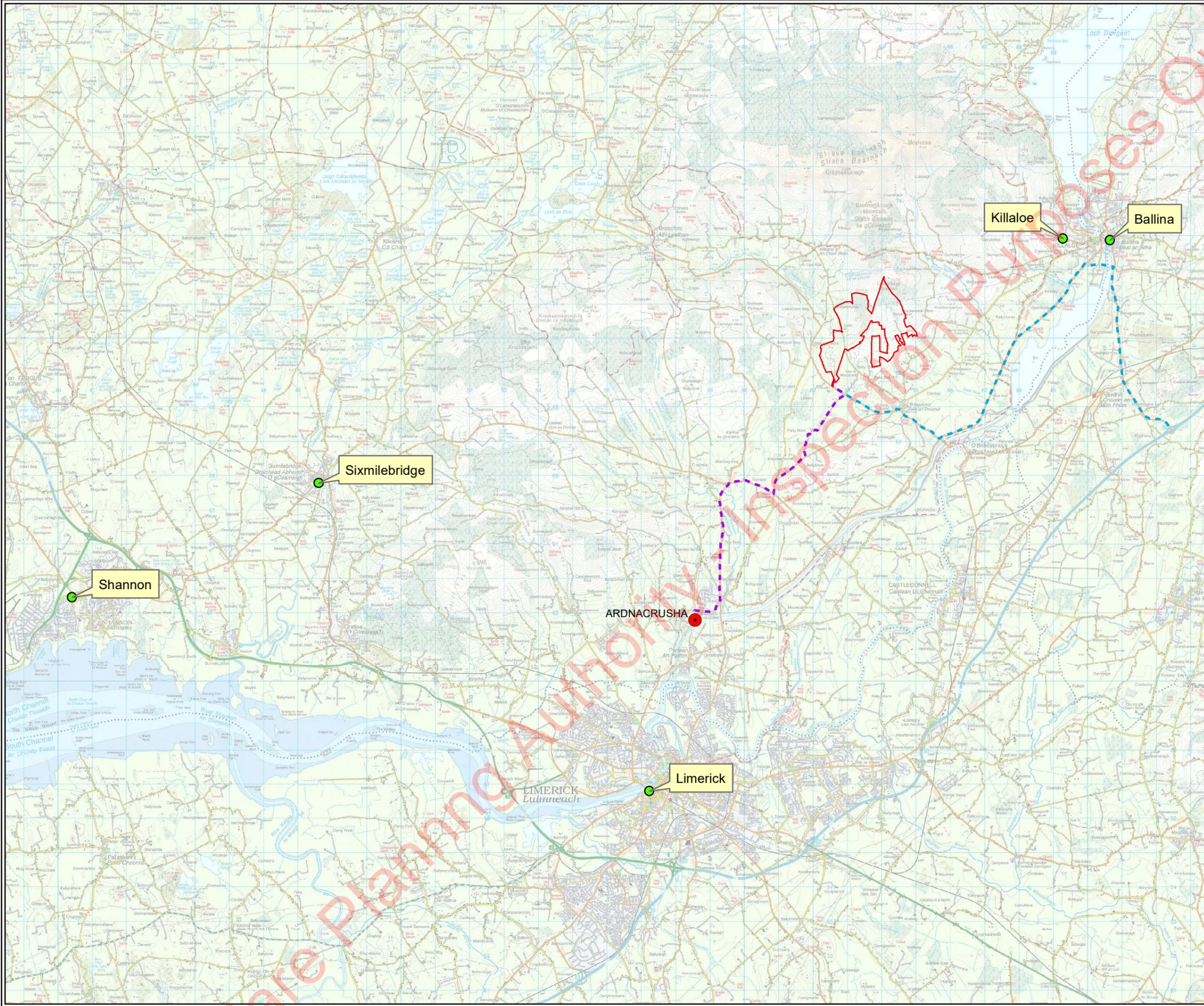


Tooreen, Aharinaghbeg, Knockdonagh, Roo East, Blackwater, Rosmadda West, Parkroe, Lackyle and Ballykeelaun. There will be no overhead lines required for the grid connection.

Large components associated with the proposed Fahy Beg Wind Farm construction will be transported through the Port of Foynes including the blades, tower sections and the nacelles. The turbine components will be delivered to site by specialist transport vehicles and these components will then be assembled on site.

The turbine delivery route (TDR) from the port into which the components are shipped, to the wind farm site will use the national primary route network as much as possible. It is proposed to deliver turbines to the site from Foynes, Co. Limerick via the N69 travelling east for c.34 km then joining the eastbound N18 at Junction 2, Limerick and continuing east for c. 4 km onto the M7. It will continue along the M7 for c.21 km before departing the M7 at Junction 27 and continuing north on the R494 towards Killaloe for ca. 7km. It then turns left onto the proposed bypass and utilises the new Shannon River crossing before turning left onto the R463 travelling southbound then continue south on the R463 for c. 8km before turning right onto the R466. and following the R466 to the entrance of the site. Loads will continue north on the R466 to the proposed site entrance.

Access to the wind farm site will be made through the existing Roadstone quarry to the southwest. The existing quarry entrance on the R466 will be utilized for construction purposes. There will be two more entrances on the Fahymore local road. There will be an entrance on either side of the road to facilitate a crossing point between the quarry and the site. There will be a 5m concrete apron at both entrances of the crossing point. All large loads including turbine towers, turbine blades and trucks with materials will only be permitted to enter via the quarry. Only light goods vehicles (LGV) such as vans and jeeps will be allowed travel along the Fahymore local road and enter the site using that site entrance.



- Legend**
- Wind Farm Site
 - Grid Connection Route
 - Turbine Delivery Route
 - Ardacrusha Substation (110kV)

TITLE:	Site Location and Project Overview		
PROJECT:	Fahy Beg Wind Farm, Co. Clare		
FIGURE NO:	3.1		
CLIENT:	Innogy Renewables Ireland Ltd.		
SCALE:	1:110000	REVISION:	0
DATE:	27/05/2022	PAGE SIZE:	A3





1.3 Application and EIAR Requirement

Under Section 172 of the Planning and Development Act (the Planning Act), as amended, a planning application for a development which comes within a class of development specified under Schedule 2 of Part 5 of the Planning and Development Regulations must be accompanied by an Environmental Impact Assessment Report. Accordingly, as the proposed development has more than 5 no. turbines and generating capacity of greater than 5MW this proposed development has been subject to impact assessment studies and an EIAR has been prepared in accordance with the Planning Act and Planning and Development Regulations 2001 as amended.

This report constitutes an Environmental Impact Assessment Report (EIAR) in accordance with the Directive 2011/92/EU (the EIA Directive) as amended by Directive 2014/52/EU and complies fully with the EIA Directive as amended.

1.3.1 Requirement for Competent Authority to Conduct an EIA

The European Union Directive 2011/92/EU (the EIA Directive) as amended by Directive 2014/52/EU on the assessment of the effects of certain public and private projects on the environment, requires Member States to ensure that a competent authority (in this instance Clare County Council) carries out an appraisal of the environmental impacts of certain types of project, as listed in the Directive, prior to development consent being given for the project.

The requirement for EIA of certain categories of development is transposed into Irish legislation under the Planning and Development Act 2000 as amended and the Planning and Development Regulations 2001 as amended (the “2001 Regulations”). Given the scale of development proposed the proposed development meets the mandatory threshold for EIA. Therefore, an EIAR has been prepared in accordance with the Planning Act and Planning and Development Regulations 2001 (as amended) and Directive 2014/52/EU.

1.3.2 Appropriate Assessment

In compliance with the provisions of Article 6 of the Habitats Directive (92/43/EEC), as implemented by Part XAB of the 2000 Planning Act, in circumstances where a proposed plan or project not directly connected with or necessary to the management of the European site is likely to have a significant effect on a European (or Natura 2000) site, either individually or in combination with other plans or projects, an Appropriate Assessment (AA) must be undertaken by the competent authority of the implications for the site in view of the site’s conservation objectives.

European Sites include Special Areas of Conservation (SAC) designated under the Habitats Directive, Special Protection Areas (SPA) designated under the Birds Directive (2009/147/EEC) and candidate SACs (cSACs) or proposed SPAs (pSPAs), all of which are afforded the same level of protection as fully adopted sites.

The assessment procedure is based on a four-stage approach, where the outcome at each successive stage determines whether a further stage in the process is required.

The purpose of the screening stage is to determine, on the basis of a preliminary assessment and objective criteria, whether a plan or project, alone and in-combination with other plans or projects, could have significant effects on a Natura 2000 site in view of the site’s conservation objectives. There is no necessity to establish such an effect; it is merely necessary for the competent authority to determine that there may be such an effect. The threshold at this first stage is a very low one and operates as a trigger in order to



determine whether a Stage Two AA must be undertaken by the competent authority on the implications of the proposed development for the conservation objectives of a European site. Where significant effects are likely, uncertain or unknown at screening stage, a second stage AA will be required.

A Stage Two AA is a focused and detailed examination, analysis and evaluation carried out by the competent authority of the implications of the plan or project, alone and in-combination with other plans and projects, on the integrity of a European site in view of that site's conservation objectives.

In the context of the proposed Fahy Beg Wind Farm, an Appropriate Assessment Screening Report and Natura Impact Statement have been prepared and submitted with this application for permission so to enable the competent authority to carry out the Appropriate Assessment.

1.4 EIAR Methodology and Structure

The Environmental Impact Assessment Report (EIAR) is a report of the effects, if any, which a proposed development, if carried out, would have on the environment. The EIAR provides the Competent Authority and the public with a comprehensive understanding of the project, the existing environment, the likely significant effects of the project on the environment and the mitigation measures proposed.

Article 3 of the 2014 EIA Directive as amended states that an "environmental impact assessment shall identify, describe and assess in an appropriate manner, in the light of each individual case, the direct and indirect significant effects of a 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;*
- (e) the interaction between the factors referred to in points (a) to (d)"*

The effects referred to above shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and /or disasters that are relevant to the project concerned.

1.4.1 EIAR Methodology

The EIAR has been prepared in accordance with Directive 2011/92/EU as amended by Directive 2014/52/EU (the EIA Directive). Schedule 6 of the Planning and Development Regulations 2001 (as amended) and Article 5 of the EIA Directive set out the information to be contained in an EIAR.

In addition, in the preparation of this EIAR a scoping of possible impacts of the proposed development was carried out to identify impacts thought to be potentially significant, not significant or uncertain.

Consultation with the relevant private and public agencies ensured that likely significant impacts were addressed. Details of the consultation carried out to date for the proposed development are outlined in Chapter 5: EIA Scoping, Consultation and Key Issues of this EIAR.



Schedule 6 of the Planning and Development Regulations 2001 (as amended) describes the information to be contained in an EIAR:

1.
 - a) A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development;
 - b) A description of the likely significant effects on the environment of the proposed development;
 - c) A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development;
 - d) A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment.
2. Additional information, relevant to the specific characteristics of the development or type of development concerned and to the environmental features likely to be affected, on the following matters, by way of explanation or amplification of the information referred to in paragraph 1:
 - a) A description of the proposed development, including in particular –
 - i. A description of the location of the proposed development;
 - ii. A description of the physical characteristics of the whole proposed development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;
 - iii. A description of the main characteristics of the operational phase of the proposed development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and;
 - iv. An estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation) and quantities and types of waste produced during construction and operation phases.
 - b) A description of the reasonable alternatives (for example in terms of project design, technology, location, size and scale) studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects;
 - c) A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge;
 - d) A description of the factors specified in paragraph (b)(i) (I) to (V) of the definition of 'environmental impact assessment' in section 171A of the Act likely to be significantly affected by the proposed development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for



example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape;

- e)
- (i) a description of the likely significant effects on the environment of the proposed development resulting from, among other things-
 - (I) the construction and existence of the proposed development, including, where relevant, demolition works,
 - (II) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources,
 - (III) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste,
 - (IV) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters),
 - (V) the cumulation of effects with other existing or approved developments, or both, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources,
 - (VI) the impact of the proposed development on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the proposed development to climate change, and;
 - (VII) the technologies and the substances used, and;
 - (ii) the description of the likely significant effects of the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment' in section 171A of the Act should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the proposed development, taking into account the environmental protection objectives established at European Union level or by a Member State of the European Union which are relevant to the proposed development;
- f) A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information, and the main uncertainties involved;
- g) A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of an analysis after completion of the development), explaining the extent to which significant adverse effects on the environment are avoided, prevented, reduced or offset during both the construction and operational phases of the development;
- h) A description of the expected significant adverse effects on the environment of the proposed development deriving from its vulnerability to risks of major accidents and/or disasters which are relevant to it. Relevant information available and obtained through risk assessments pursuant to European Union legislation such as the Seveso III Directive or the Nuclear Safety Directive or relevant assessments carried out pursuant to national legislation may be used for this purpose, provided that the requirements of the Environmental Impact Assessment Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for, and proposed response to, emergencies arising from such events.



The assessment of environmental impacts has been conducted in accordance with the guidance set out in the following documents:

- *Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report (EC, 2017)*
- *Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022)*
- *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (DoHPLG, 2018)*
- *Wind Energy Development Guidelines for Planning Authorities (DoEHLG, 2006)*
- *Draft Revised Wind Energy Development Guidelines (DoHPLG, 2019)*
- *European Commission Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment, EU 2013*
- European Commission notice: Guidance document on wind energy developments and EU nature legislation (2020).

The EIAR firstly sets out the planning context, the background to the project, the need for the development, a description of the evolution of the project through the alternatives considered and a description of the proposed development. This sets the reader in context as to the practical and dynamic process undertaken, in order to arrive at the layout and design of the proposed development that will cause least impact on the environment.

Subsequent chapters deal with specific environmental topics for example, traffic & transportation, air quality & climate change, hydrology & water quality, noise, etc. These assessments involve specialist studies and evaluations. The methodology applied during these specific environmental assessments is a systematic analysis of the proposed development in relation to the existing environment. The broad methodology framework for these assessments is outlined below and is designed to be clear, concise and allow the reader to logically follow the assessment process through each environmental topic. In some instances, more specific topic related methodologies are outlined in the relevant chapters of the EIAR.

The broad methodology framework used in all chapters includes:

- Introduction
- Methodology
- Existing Environment
- Potential Impacts
- Mitigation Measures
- Residual Impacts

Introduction

This section generally introduces the environmental topic to be assessed and the areas to be examined in the assessment.



Methodology

Specific topic related methodologies are outlined in this section. This will include the methodology used in describing the existing environment and undertaking the impact assessment. It is important that the methodology is documented so that the reader understands how the assessment was undertaken. This can also be used as a reference if future studies are required.

Existing Environment

An accurate description of the existing environment is necessary to predict the likely significant impacts of a proposed development. Existing baseline environmental monitoring data can also be used as a valuable reference for the assessment of actual impacts from a development once it is in operation.

To describe the existing environment, desktop reviews of existing data sources were undertaken for each specialist area. This literature review relied on published reference reports and datasets to ensure the objectivity of the assessment.

Desktop studies may also be supplemented by specialised field walkovers or studies in order to confirm the accuracy of the desktop study or to gather more baseline environmental information for incorporation into the EIAR.

The existing environment is evaluated to highlight the character of the existing environment that is distinctive and what the significance of this is. The significance of a specific environment can be derived from legislation, national policies, local plans and policies, guidelines or professional judgements. The sensitivity of the environment is also described.

Potential Impacts

In this section, individual specialists predict how the receiving environment will interact with the proposed development. The full extent of the proposed development's potential effects and emissions before the proposed mitigation measures are introduced is outlined here. Potential impacts from the construction, operational and decommissioning phases of the proposed development are outlined. Interactions and cumulative impacts with other environmental topics are also included in this evaluation.

The evaluation of the significance of the impact is also undertaken. Where possible, pre-existing standardised criteria for the significance of impacts will be used.

Such criteria can include Irish legislation, international standards, European Commission and Environmental Protection Agency (EPA) guidelines or good practice guidelines. Where appropriate criteria do not exist the assessment methodology section states the criteria used to evaluate the significance.

Mitigation Measures

If significant impacts are anticipated mitigation measures are devised to minimise impacts on the environment. Mitigation measures by avoidance, by reduction and by remedy can be outlined.

Residual Impacts

The assessment identifies the likely impact that will occur after the proposed mitigation measures have been put in place. These impacts are described in detail and assessment of their significance undertaken.



1.4.2 EIAR Structure

The EIAR has been prepared in line with EPA guidance document *Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2022)*. The format of this EIAR is designed to ensure that standard methods are used to describe all sections of the EIAR.

Using this structure there is a separate chapter for each topic, e.g. air quality and climate, biodiversity, hydrology. The description of the existing environment, the proposed development and the potential impacts, mitigation measures and residual impacts are grouped in the chapter. The grouped format makes it easy to investigate topics of interest and facilitates cross-reference to specialist studies.

The EIAR consists of the following chapters:

- Chapter 1 - Introduction
- Chapter 2 - Site Selection and Alternatives
- Chapter 3 - Description of the Proposed Development
- Chapter 4 - Policy
- Chapter 5 - EIA Scoping, Consultation and Key Issues
- Chapter 6 - Air Quality and Climate
- Chapter 7 - Noise and Vibration
- Chapter 8 - Biodiversity
- Chapter 9 - Land, Soils & Geology
- Chapter 10 - Hydrology and Water Quality
- Chapter 11 – Population, Human Health & Materiel Assets
- Chapter 12 – Shadow Flicker
- Chapter 13 - Traffic & Transportation
- Chapter 14 - Archaeology, Architectural and Cultural Heritage
- Chapter 15 - Landscape & Visual
- Chapter 16 - Telecommunications and Aviation
- Chapter 17 - Interactions of the Foregoing

The EIAR is structured as follows:

Volume 1 – Non-Technical Summary (NTS) (including figures)

Volume 2 – Main EIAR

Volume 3 – Appendices to the Main EIAR

Volume 4 – Landscape and Visual Maps and Photomontages

It should also be noted, for the sake of completeness, that a separate Natura Impact Statement (NIS) has also been submitted with the application. The application is also supported by Planning Drawings and a Construction Environmental Management Plan included in Appendix 3.1.



Annex IV of the EIA Directive requires the EIA to include a description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned.

Two key areas need to be considered namely;

- The Project's potential to cause accidents and/or disasters
- The vulnerability of the Project to potential disaster/accident, both natural and manmade.

The Construction and Environmental Management Plan submitted as part of this EIAR includes an emergency response plan in the event of emergencies or disaster situations.

It also outlines the statutory obligations of the Developer, Designer and Contractor pursuant to the Safety, Health and Welfare at Work Act 2005 and the Safety, Health and Welfare at Work (Construction) Regulations 2013 with regard to safety management.

The CEMP also includes mitigation in the event of a catastrophic event associated with operational wind turbines.

Chapter 11 – Population, Human Health and Material Assets assesses the projects vulnerability to major accidents and natural disasters and the potential adverse impacts on human health and the environment. The chapter examines potential disaster situations including;

- Flooding,
- Fire,
- Major incidents involving dangerous substances
- Catastrophic events; and
- Landslides.

1.4.3 Cumulative Impact

The potential cumulative impact of the Project has been assessed in accordance with Annex IV of the EIA Directive as amended which provides that the EIAR must contain a description of the likely significant effects of the project on the environment resulting from the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources.

The assessment of projects cumulatively with other projects has four principal aims:

1. To establish the range and nature of existing projects within the cumulative impact study area of the Project.
2. To summarise the relevant projects which have a potential to create cumulative impacts.
3. To establish anticipated cumulative impact findings from expert opinions within each relevant field. Detailed cumulative impact appraisals are included in each relevant section of the EIAR.
4. To identify the projects that hold the potential for cumulative or in combination effects and screen out projects that will neither directly or indirectly contribute to cumulative or in combination impacts.



The geographic extent of the cumulative assessment is considered on a case-by-case basis, in line with the Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (European Commission, 1999). Assessment material for this cumulative impact appraisal was compiled on relevant developments within the vicinity of the proposed Fahy Beg Wind Farm project, including the length of the proposed grid connection route and TDR. For the purpose of Cumulative Assessment of Landscape and Visual, all existing and approved wind farms and wind farms pending a decision from the planning authority and An Bord Pleanála within 20km from the outermost turbines of the proposed Fahy Beg Wind Farm were identified for Cumulative Visual Assessment. This study area is in accordance with the Wind Energy Development Guidelines (2006) and is further detailed in Section 15.3.2 of the EIAR.

All existing and approved projects and projects pending a decision from the planning authority or An Bord Pleanála within 20km of the proposed Fahy Beg Wind Farm were considered for potential Cumulative Assessment in all other chapters of this EIAR. This measurement was taken from the outermost turbines of the proposed Fahy Beg Wind Farm. A 20km distance was considered appropriate due to the size and extent of the proposed wind farm and the nature of the potential effects as detailed throughout the EIAR.

All existing and approved projects and projects pending a decision from the planning authority or An Bord Pleanála within 250m of the grid route and TDR lands were considered for potential Cumulative Assessment in all chapters of this EIAR. A 250m distance was considered appropriate due to the brief to temporary nature of the works involved along the grid route and TDR and due to the limited extent of the works required.

The material for the cumulative assessment was gathered through a search of relevant County Councils' Online Planning Registers, the An Bord Pleanála website and the EIA Portal. Relevant EIA documents, planning application details and planning drawings were reviewed, which served to identify the locations of existing and approved projects and projects pending a decision from the planning authority, or An Bord Pleanála, within their activities and their environmental impacts. The relevance of the projects was considered on a case-by-case basis in each chapter as necessary depending on the interaction and likelihood of in combination impacts. A full list of projects identified for cumulative assessment is set out in Appendix 1.2 of Volume 3 of this EIAR.

It should be noted that the clear-felling of trees in the State requires a felling license. The associated afforestation of alternative lands equivalent in area to those lands being permanently clear-felled is also subject to licensing ('afforestation licensing'). The Forest Service of the Department of Agriculture, Food & the Marine is Ireland's national forest authority and is responsible for all forest licensing.

In light of the foregoing and for the purposes of this project, the developer commits that the location of any replanting (alternative afforestation) associated with the project will be greater than 10km from the wind farm site and also outside any potential pathways of connectivity with the proposed project. This will ensure that there is no potential cumulative impact associated with this replanting. In addition, the developer commits to not commencing the project until both felling and afforestation licenses are in place and this ensures the afforested lands are identified, assessed and licensed appropriately by the relevant consenting authority.

1.5 Contributors to the EIAR

Fehily Timoney and Company (FT) is a consultancy based in Cork, specialising in civil and environmental engineering, and environmental science. FT is well established as a leading consultancy in wind farm development in Ireland. The company has established a professional team specialising in wind farm development. This team has the support of many in-house engineers, scientists and planners.



FT was retained by the applicant to undertake the detailed environmental assessment and prepare the EIA for the proposed development, as well as preparing the application for consent for submission to Waterford County Council.

Specialist and competent experts that contributed to and are responsible for each EIA chapter/topic are outlined in Table 1-1. Curricula Vitae of contributors are presented in Appendix 1.1 of Volume 3 of this EIA wherein the competence, experience and relevant qualification(s) for each expert is detailed.

Table 1-1: Contributors to the EIA

EIA Topic	Company	Name and Qualifications
Chapter 1 – Introduction	FT	Sinéad Lynch, MEng (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 2 - Need for the Development and Alternatives Considered	FT	Anthony Ryan, BA, MPlan (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 3 – Description of the Development	FT	Trevor Byrne, BSc, MSc, MIEI (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 4 – Policy	FT	Killian Whyte, BSc, HDipSP, MSc (Co-Author) Anthony Ryan, BA, MPlan (Co-Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 5 – EIA Scoping, Consultation and Key Issues	FT	Killian Whyte, BSc, HDipSP, MSc (Co-Author) Conor Crowther, BSc, MSc (Co-Author) Anthony Ryan, BA, MPlan (Reviewer)
Chapter 6 – Air Quality and Climate	FT	Leigh Doyle, MEng (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 7 – Noise and Vibration	FT	Maureen Marsden, MEng (Co-Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 8 – Biodiversity	FT	Ben O’Dwyer, BSc (Author) Kate Mahony, Bsc, Msc, PhD (FT Ecologist) Eamonn Delaney, Bsc, MSc. (Delichron Ecology Ecologist) Chandra Walter, BSc, MSc. (FT Ecologist) Seán Ronayne, BSc, MSc (FT Ecologist) Oisín O Sullivan, BSc, CIEEM (Woodrow Environmental Consultants) Mike Trewby, Bsc, PGDip, CIEEM (Woodrow Environmental Consultants) Sara Fissolo, BCI, CIEEM (Woodrow Environmental Consultants) Aoife Moroney, BSc, Msc, CIEEM (Woodrow Environmental Consultants) Louise Gannon, BSc (Woodrow Environmental Consultants) Nicole Fleming, BSc (Woodrow Environmental



EIAR Topic	Company	Name and Qualifications
		Consultants) Patrick Devereux, Bsc (Woodrow Environmental Consultants) Joe Kelly, BSc (Woodrow Environmental Consultants) Rachel Irwin, BSc, CIEEM (Woodrow Environmental Consultants) Geoff Oliver, BSc, PhD (Woodrow Environmental Consultants) Mikee Hoit, BSc (Woodrow Environmental Consultants) Daelyn Purcell, BSc (Woodrow Environmental Consultants) Ken Westman, Dip (Woodrow Environmental Consultants) Will O'Connor, BSc, MSc, PhD, CIEEM (Woodrow Environmental Consultants)
Chapter 9 – Land, Soil & Geology	FT	Aaron Clark, BSc, MSc (Author) Tom Clayton, MEng, CEng (Reviewer)
Chapter 10 – Hydrology and Water Quality	Wardell Armstrong	Dr. Craig Speed, BSc (Hons), PhD, Wardell Armstrong LLP (Reviewer) Caroline Chestnut, BSc, MSc, Wardell Armstrong LLP (Author) Rachel Graham, BSc, MSc, Wardell Armstrong LLP (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 11 – Population, Human Health & Material Assets	FT	Killian Whyte, BSc, HDipSP, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 12 – Shadow Flicker	TNEI Services Ltd	Jake Collins-May, MSc, PhD (Author) Jim Singleton, BSc, PGDip (Reviewer) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 13 – Traffic and Transportation	FT	Leigh Doyle, MEng (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 14 Archaeology, Architectural and Cultural Heritage	John Cronin & Associates	Tony Cummins, BA, MA (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 15 – Landscape and Visual	Macro Works	Richard Barker, BA, PGDip, MLA, MILI (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 16 – Telecommunications and Aviation	FT	Sinead Lynch, MEng (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 17 – Interactions of the Foregoing	FT	Killian Whyte, BSc, HDipSP, MSc (Author) Sinead Lynch, MEng (Reviewer)



1.6 Permission Period

A ten-year consent is being requested for this development. That is, planning consent for the construction of the development would remain valid for ten years following the grant of permission. We note that the Wind Energy Development Guidelines (2006) state that “Planning Authorities may grant permission for a duration longer than 5 years if it is considered appropriate, for example, to ensure that the permission does not expire before a grid connection is granted. It is, however, the responsibility of the applicants in the first instance to request such longer durations in appropriate circumstances”. This text also appears in section 7.22 of the Draft Revised Wind Energy Development Guidelines (2019).

A 10-year planning permission is considered appropriate for a development of this size to ensure all consents are in place.

The expected physical lifetime of the turbines is approximately 35 years. After this time, the developer will make a decision whether to replace or decommission the turbines. It should be noted that section 7.20 of the Wind Energy Development Guidelines (2006) includes for the following:

‘The inclusion of a condition which limits the life span of a wind energy development should be avoided, except in exceptional circumstances’

In this respect, the applicant requests the grant of permission is on the basis of a 35-year operational period from the date of full operational commissioning of the wind farm. With permission for the onsite substation sought in perpetuity given that the substation could form part of the national electricity network. Therefore, the substation will be retained as a permanent structure and will not be removed.

35 years is the anticipated minimum useful lifespan of wind turbines which are being produced for the market today. The lifespan of wind turbines has been increasing steadily in recent years and allowing this duration will improve the overall carbon balance of the development, therefore maximising the amount of fossil fuel usage that will be offset by the wind farm. Leaving the wind turbines in-situ until the end of their useful lifespan would be optimum from an environmental viewpoint, particularly in relation to carbon savings.

1.7 Difficulties Encountered

There were no difficulties encountered during the preparation of this EIAR.

1.8 Viewing and Purchasing of the EIAR

Copies of this EIAR including the Non-technical Summary and the Appendices may be inspected free of charge or purchased by any member of the public during normal office hours at Clare County Council Planning Department:



1.9 References

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