FEHILY TIMONEY

DESIGNING AND DELIVERING A SUSTAINABLE FUTURE

ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR) FOR THE PROPOSED DREHID WIND FARM AND SUBSTATION, CO. KILDARE

VOLUME 2 – MAIN EIAR

CHAPTER 1 - INTRODUCTION

Prepared for: North Kildare Wind Farm Ltd.

Date: May 2025

Core House, Pouladuff Road, Cork
T12 D773, Ireland

T: +353 21 496 4133 E: info@ftco.ie

CORK | DUBLIN | CARLOW

www.fehilytimoney.ie

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

Fehily Timoney & Company (FT) has prepared this environmental impact assessment report (EIAR) on behalf of North Kildare Wind Farm Limited. North Kildare Wind Farm Limited intends to apply to An Bord Pleanála for planning permission to construct the Proposed Development in north County Kildare.

The 'Proposed Development' assessed in this EIAR comprises the following elements:

- The 'Proposed Wind Farm' (consisting of 11 turbines, turbine foundations and hardstanding areas, new access tracks, underground electrical and communications cabling, drainage, temporary site compounds and associated works; The Proposed Wind Farm also includes the 'Proposed Recreation and Amenity Trail');
- The 'Proposed Substation' (110 kV substation and loop-in connection to the existing overhead lines);
- Turbine delivery route (TDR).

In order to allow the Competent Authority (in this instance An Bord Pleanála) to assess the Proposed Wind Farm and the Proposed Substation pursuant to Section 37 and Section 182 of the Planning & Development Act 2000 respectively, the EIAR splits the project into the separate elements to enable the Competent Authority to assess each element of the project individually and cumulatively. Where the environmental impacts are not being assessed, for example in this Introduction chapter, the 'Proposed Development' is described as a whole in the interest of brevity, to include the Proposed Wind Farm, the Proposed Substation, and the TDR.

The location of the Proposed Development is shown on Figure 1-1. A full description of the proposed project is included in Chapter 3 of this EIAR.

The Proposed Development is located on a mix of private and public lands, currently in use for agriculture and forestry purposes in a relatively flat area in north County Kildare. The Proposed Wind Farm includes lands in the townlands of Ballynamullagh, Kilmurry, Coolree, Killyon, Mulgeeth and Drehid, Co Kildare.

The Proposed Substation, including the loop-in connection to the existing Kinnegad-Rinawade overhead line, and the access tracks approaching from the main site entrance are wholly located in County Kildare and includes lands in the townlands of Ballynamullagh, Kilmurry, Coolree and Mulgeeth.

1.1 Applicant

The applicant is North Kildare Wind Farm Ltd., a wholly owned subsidiary for Statkraft Ireland.

Statkraft is one of the biggest renewable energy developers in Ireland with a pipeline of over 4 GW of offshore and onshore wind, solar and grid services projects. The Statkraft Ireland team, which is based in Cork and Tullamore, Co. Offaly, has constructed a portfolio of almost 350 MW of renewable energy projects across the country, operates over 500 MW, and has an established track record in wind energy in Ireland having previously developed wind farms in counties Clare, Cork, Kerry, Donegal, Limerick, Galway, Waterford, Tipperary, Offaly, and Tyrone.

1.2 Planning History

An application for Planning Permission was submitted to Kildare County Council for a 12 no. turbine wind farm development with a turbine tip height of up to 169 m with an underground cable connecting the 12 no. turbine wind farm development via underground cable to the adjacent Dunfierth substation via the L1004 public road in 2018 pursuant to Planning Ref. 18/1534. Permission was granted by An Bord Pleanála following a First Party Appeal pursuant to ABP Ref. 306500-20. The An Bord Pleanála decision was challenged by Judicial Review and in June 2022 ABP consented to an order of certiorari on ground of "inadequate particulars of design".

It is now proposed to re-submit the Proposed Development for planning and address the order of certiorari in accordance with the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended).

Since the lodgement of the original Drehid Wind Farm Project 2018, it was subsequently determined that the existing Dunfierth 110 kV substation is not suitable for a new generator connection in its current format and would require a significant rebuild and additional network interruption to facilitate connection at this existing node. The Proposed Development therefore now intends to connect to the national grid via a new on-site 110 kV loop-in/loop-out substation within the project lands at the northern end of the site connecting to the existing Kinnegad/Rinawade 110 kV overhead line.

It is also proposed to remove one no. turbine (turbine I.D. T4 in the 2018 layout) and carry out some minor modifications to the site including the internal tracks and turbine positions. In addition, the TDR has been modified to account for adjustments to the site layout, with some turbines now being delivered to the site from a new access point at the northern extent of the site. Full details of the TDR can be found in the TDR report (Appendix 13.1).

1.3 Outline of the Proposed Development

The Proposed Wind Farm will consist of 11 turbines each with a rotor diameter of 133 m. 10 no. turbines will have a hub height of 100.5 m and a tip height of 167 m; while one turbine (T1, closest to the site entrance) will have a hub height of 81.4 m and a tip height of 147.9 m. The Proposed Wind Farm will also include permanent turbine foundations and crane pad hardstanding areas and associated drainage and new and upgraded access tracks.

Access to the Proposed Development will be achieved via an upgraded existing entrance from the L5025 public road which is located to the south of the Proposed Development. The northern section of the Proposed Development which will consist of turbines T4 to T11 will utilise the L50242 which dissects the site centrally, with a secondary access being provided on the L50242 to gain access to this northern section of the site.

For the delivery of turbines during construction, the L5025 will be used to deliver turbines T1 to T3 to the site and a turbine delivery access from the L5012 will be used to deliver turbines to the northern section of the site i.e. turbines T4 to T11. This entrance will only be for use during the delivery of oversized turbine components and will not be utilised for any other traffic e.g. HGVs and/or LGVs. There is also an existing Coillte entrance off the L5012 which will be incorporated into the Proposed Development but will only be used for pedestrian and cyclist access associated with the Proposed Recreation and Amenity Trail, and will not be used for any vehicular access.

The Proposed Wind Farm will have a Maximum Export Capacity (MEC) of 52.8 MW.

A rated output of 4.8 MW has been used below to calculate the maximum power output of the Proposed Wind Farm, which would result in an estimated installed capacity of 52.8 MW. Assuming an installed capacity of 52.8 MW, the Proposed Wind Farm has the potential to produce up to 161,885 MWh (megawatt hours) of electricity per year which would be sufficient to supply approximately 38,500 Irish households with clean renewable electricity per year (as calculated in Chapter 3 of this EIAR – Description of the Proposed Development).

The electricity generated by the Proposed Wind Farm will be transmitted by a collector system of underground cables to the Proposed Substation. The Proposed Substation will then connect to the National Grid by way of a loop-in/loop-out connection to the existing 110 kV Kinnegad-Rinawade overhead lines. The Proposed Substation will comprise of two separate compounds and buildings, an Eirgrid compound and an Independent Power Producer (IPP) compound, necessary to export the electricity generated from the Proposed Wind Farm to the national grid. The compounds are made up of a hardstanding permeable crushed stone surface and surrounded by a palisade fence. The hardstanding area measures approximately 1.32 hectares. 2 no. line-cable interface masts will enable this loop-in connection to the existing overhead line. The steel lattice masts will extend to a height of 16 m above existing ground level. The proposed loop-in connection to the existing overhead line is situated in agricultural lands, approximately 500 m northeast of the Proposed Substation compound. The Proposed Substation will be connected to the masts via underground cables.

As part of the Proposed Development it is proposed to enhance the existing walking trail from the local road to the north of the site. The Proposed Recreational Amenity Trail will consist of 2 routes – a shorter 1.2km loop in the northern section of the site and a longer route incorporating this route and other existing tracks and new site roads which is ca. 4km. This trail will be open to the community as a walkway and can be used for a number of activities including walking, bird watching, nature and wildlife exploration. The Amenity Trail will include facilities for safely storing bikes and picnic areas for recreation with interpretative information provided to add to the experience.

The Proposed Turbine delivery route was selected following a detailed delivery route selection assessment carried out by Pell Frischmann to identify the optimum delivery route to site. It is proposed to deliver turbines to the site from the M4 motorway and then the R402 to the junction of the L402/L5025 and follow the L5025 to the main site entrance.

From the main site entrance, the components being delivered for turbines T01, T02 and T03 can be delivered directly to their respective hardstanding locations. However, an alternative delivery route is required for delivery of the components of the remaining turbines (T04 to T11).

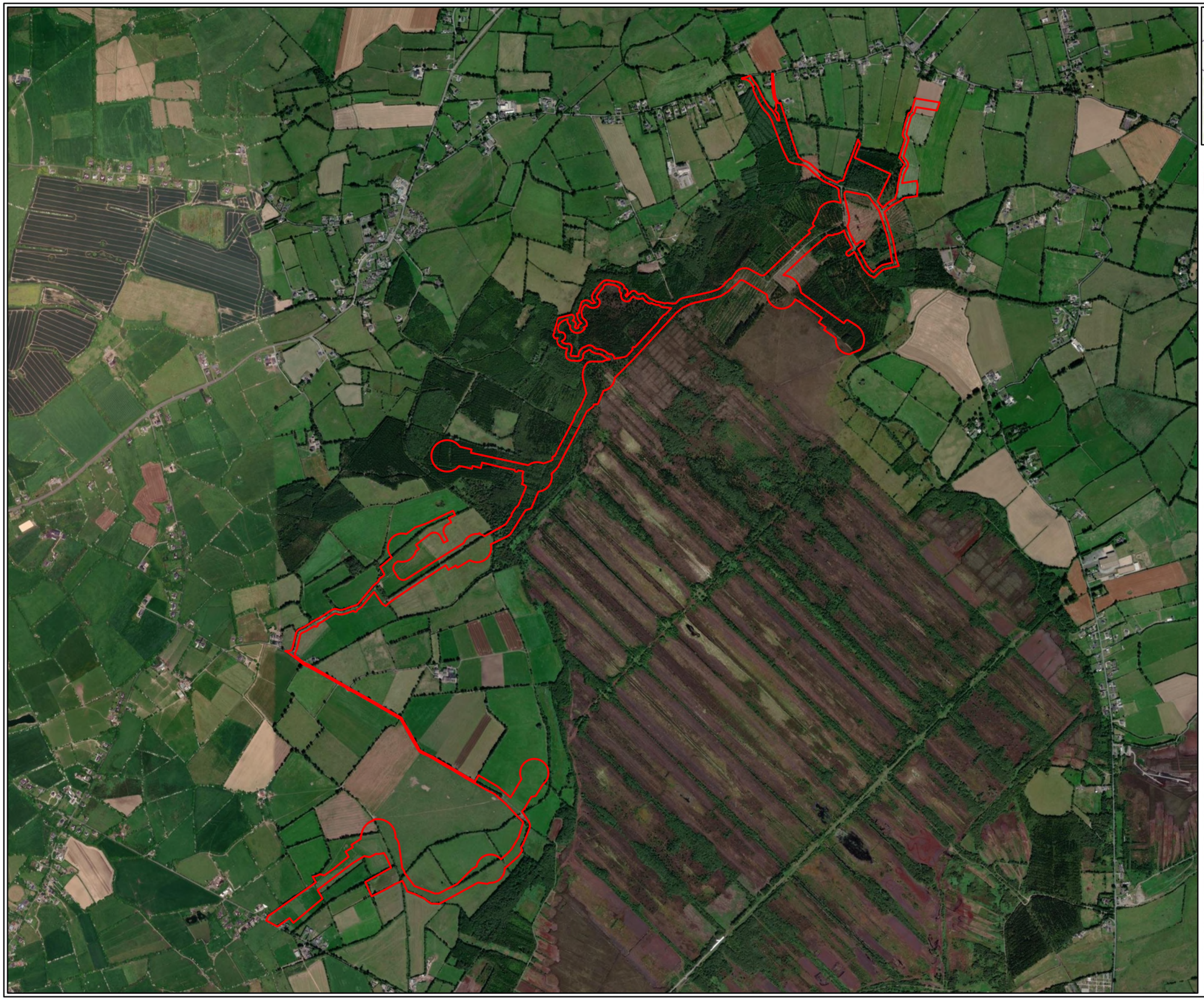
To deliver the blades for turbines T4 to T11:

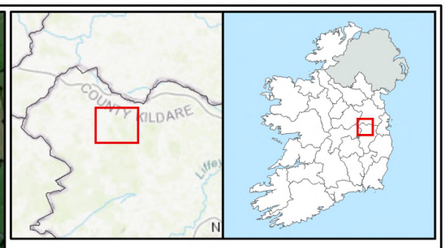
- The blades will be set down at the designated Blade Transfer Area inside the main site entrance;
- The blades will then be transferred onto a blade lifting trailer;
- The blade lifting trailer will carry the blades back out the main site entrance, and turn right onto the L5025, to proceed northwest;
- The blade lifting trailer will turn right onto the R402 and proceed northbound;
- At the Raven Junction, loads will turn right onto Kilshanroe Road and will continue eastbound to a new site access which will be constructed specifically for the purpose of turbine delivery;
- Loads will turn right off Kilshanroe Road into the new site entrance;
- The new site entrance will lead to a new access track, which will join the existing Coillte access track, north of the T11 location at ITM coordinates 676175, 737950. It should be noted that this entrance and access will be utilised for delivery of turbine components only, and will not be used by any other traffic during the construction or operational phase.

Turbine components for Turbines T4 to T11 will follow the same route as Turbines T1 to T3. In the southern section of the site, blade loads will be transferred to a blade lifting trailer and will then proceed to the entrance for the northern portion of the site. All other sections will undertake a U turn and will then proceed to the northern access junction.

Path: R:\Map Production\2022\P22-242\Workspaces\EIAR_Chapter_1_and_2\EIAR_Chapter_1_and_2.aprx

World Topographic Map: Esri, HERE, Garmin, FAO, USGS, NGA
World Imagery: Microsoft
Creative and Commons Attribution 4.0 International (CC BY 4.0) licence https://creativecommons.org/licenses/by/4.0/ [INPUT SOURCE HERE];
If Applicable: Mapping Reproduced Under Licence from the Ordnance Survey Ireland Licence No. CYAL50368274 © Government of Ireland





Legend

Proposed Development Boundary

TITLE: Site Location			
PROJECT: Drehid Wind Farm and Substation			
FIGURE NO:	1.1		
CLIENT:	North Kildare Wind Farm Ltd.		
SCALE:	1:20,000	**REVISION:**	0
DATE:	28/04/2025	**PAGE SIZE:**	A3

FEHILY TIMONEY
Cork | Dublin | Carlow
www.fehilytimoney.ie

N W E S

0 0.5 1 2 Kilometers

1.4 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 5 MW 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.

1.4.1 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 An Bord Pleanála) 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.

1.4.2 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 Development, 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.

1.5 Strategic Infrastructure Development (Section 37)

In relation to projects that may be deemed to be Strategic Infrastructure Development (SID), Part 1 of the Seventh Schedule of the Planning and Development Act 2000 (Act), as amended, specifies, inter alia, the following classes of development: "An installation for the harnessing of wind power for energy production (a wind farm) with more than 25 turbines or having a total output greater than 50 megawatts." Once an SID determination request is made by a prospective applicant, An Bord Pleanála (the Board) must satisfy itself that the development meets one or more of the conditions set out in section 37A(2) of the Planning and Development Act 2000 as amended.'

On 25th August 2022 the Applicant opened pre-application consultation under Section 37B of the Planning and Development Act, 2000 (as amended) with An Bord Pleanála for a development of 12 no. wind turbines in County Kildare. An initial pre-application consultation meeting was held with An Bord Pleanála on the 26th of October 2022 (ABP-314463). A second pre-application consultation meeting was held with An Bord Pleanála on the 23rd November 2023. It was noted to An Bord Pleanála's representatives that through the design refinement process the number of turbines had now reduced to 11 no. turbines. On the 15th February 2024 Fehily Timoney and Company, on behalf of the Applicant, sought to close the consultation process with An Bord Pleanála. On the 23rd April 2024, An Bord Pleanála decided that the Proposed Windfarm falls within the scope of Strategic Infrastructure Development under Section 37A of the Planning and Development Act 2000 (as amended). Copies of correspondence and meeting minutes are included in Appendix 1.1 Volume III.

Therefore an application for consent for the Proposed Windfarm is being made to the Competent Authority ABP pursuant to Section 37 of the Planning & Development Act 2000 (as amended).

1.6 Strategic Infrastructure Development (Section 182)

As the Proposed Substation includes a 110 kV on-site substation and a loop-in/loop-out connection to the 110 kV Kinnegad – Rinawade 110 kV overhead line, the applicant entered into mandatory pre-application consultation with An Bord Pleanála (Reference ABP- 311394) pursuant to Section 182E, to determine whether the Proposed Substation development constituted SID; and if so, identify the procedures involved in making such an application and what considerations, related to proper planning and sustainable development or the environment, in the opinion of An Bord Pleanála, may have a bearing on any subsequent SID planning application decision.

On 23rd April 2024, An Bord Pleanála served notice of its determination that the Proposed Substation constitutes SID and that a planning application for same must be made directly to it. Accordingly, this SID application for the Proposed Substation is now being made directly to An Bord Pleanála in accordance with Section 182A of the Act.

In issuing its determination, An Bord Pleanála advised the Applicant in relation to the planning application procedures and also provided a list of prescribed bodies, which were considered relevant and to be consulted by the Applicant. Each of these prescribed bodies have also been notified by the Applicant in relation to the planning application for the proposed development.

Copies of correspondence and meeting minutes are included in Appendix 1.1 Volume III.

1.7 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.

1.7.1 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)*
- *European Commission Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment (EU 2013)*
- *Guidance document on wind energy developments and EU nature legislation (EC, 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.

1.7.2 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 – Need for the Development, 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 (split into 8.1 Biodiversity; and 8.2 Ornithology)
- 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)

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 and Environmental Management Plan included in Appendix 3.2.

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

Chapter 11 – Population, Human Health and Material Assets assesses the project's 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.

1.7.3 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 project 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 Development. 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 20 km from the outermost turbines of the Proposed 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 15.8 of the EIAR.

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 Bórd Pleanála. 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 10 km 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.

1.8 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 EIAR for the Proposed Development, as well as preparing the application for consent for submission to An Bord Pleanála.

Specialist and competent experts that contributed to and are responsible for each EIAR chapter/topic are outlined in Table 1-1. Curricula Vitae of contributors are presented in Appendix 1.3 of Volume 3 of this EIAR wherein the competence, experience and relevant qualification(s) for each expert is detailed.

Table 1-1: Contributors to the EIAR

EIAR Topic	Company	Name and Qualifications
Chapter 1 – Introduction	FT	Brian Cronin, BSc, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 2 - Need for the Development, Site Selection and Alternatives Considered	FT	Brian Cronin, BSc, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 3 – Description of the Development	FT	Brian Cronin, BSc, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 4 – Policy	FT	Brian Cronin, BSc, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 5 – EIA Scoping, Consultation and Key Issues	FT	Brian Cronin, BSc, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 6 – Air Quality and Climate	FT	Brian Cronin BSc, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 7 – Noise and Vibration	FT	Maureen Maddison BEng, MEng (Author) John Cullen (Reviewer)

EIAR Topic	Company	Name and Qualifications
Chapter 8 – Biodiversity	FT	Ben O'Dwyer BSc (Author) Jon Kearney BSc, MSc (Reviewer)
Chapter 9 – Land, Soil & Geology	FT	Julian Borlado, Ian Higgins BSc, MSc (Author) Tom Clayton BEng, MEng (Reviewer)
Chapter 10 – Hydrology and Water Quality	FT	Brian Cronin BSc, MSc and Pablo Delgado BEng, PGCert (Authors) Jim Hughes BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 11 – Population, Human Health & Material Assets	FT	Brian Cronin, BSc, MSc (Author) Jim Hughes BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 12 – Shadow Flicker	FT	Dr Jake Collins May BSc, MPhil, PhD (TNEI) (Author) Mark Tideswell BSc, Dip, AMIOA (Reviewer) Moise Coulon Dip, MIOA (Reviewer)
Chapter 13 – Traffic and Transportation	Arup	Shane McCarthy BA, MPlan (Author) Simon Van Jaarsveld BSc (Reviewer)
Chapter 14 Archaeology, Architectural and Cultural Heritage	Courtney Deery Heritage Consultancy	Siobhan Deery BA, HDip, MA (Author) Lisa Courtney BA, Dip Bus Mgt, Dip Planning and Env Law, MSc (Reviewer)
Chapter 15 – Landscape and Visual	Macro Works	Jorden Derecourt BLA, MLA (Author) Richard Barker BA Env, PG Dip, MLA (Reviewer)
Chapter 16 – Telecommunications and Aviation	FT	Brian Cronin BSc, MSc (Author), John Van Hoogstraten (Co-author) Jim Hughes BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 17 – Interactions of the Foregoing	FT	Brian Cronin, BSc, MSc (Author) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)

1.9 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 would 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.

1.10 Difficulties Encountered

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

1.11 Viewing and Purchasing of the EIAR

Copies of this EIAR and the planning application documentation including the NIS may be inspected free of charge or purchased by any member of the public during normal office hours at An Bord Pleanála. All documentation including the EIAR and NIS will be available to view on the dedicated project websites, see Chapter 5 for website URLs.

1.12 References

An Bord Pleanála (2025) Online Planning Search. Available at: http://www.pleanala.ie/. Department of Environment, Heritage and Local Government (2006), Wind Energy Development Guidelines. Available at: https://www.gov.ie

Department of Housing, Local Government and Heritage (2017), EIA Portal. Available at: https://www.housing.gov.ie/planning/environmental-assessment/environmental-impact-assessment-eia/eia-portal

Department of Housing, Planning and Local Government (2018), Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment. Available at: https://www.opr.ie/wp-content/uploads/2019/08/2018-Environmental-Impact-Assessment-1.pdf

Department of Housing, Planning and Local Government (2019), Draft Revised Wind Energy Development Guidelines. Available at: https://www.gov.ie

European Commission (2017), Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report. Available at: https://ec.europa.eu/environment/eia/pdf/EIA_guidance_EIA_report_final.pdf

European Commission (1999), Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions. Available at: https://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf

EPA (2022), Guidelines on the Information to be contained in Environmental Impact Assessment Reports. Available from: https://www.epa.ie/

EPA (2015), Advice Notes for Preparing Environmental Impact Statements. Available at: https://www.epa.ie/

European Commission (2013), Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment. Available at: https://ec.europa.eu/environment/eia/pdf/EIA%20Guidance.pdf

Government of Ireland (2000-2025), Planning and Development Acts 2000-2025. Available at: http://revisedacts.lawreform.ie/eli/2000/act/30/revised/en/html

Government of Ireland (2001-2025), Planning and Development Regulations 2001-2020. Available at: http://www.irishstatutebook.ie

FEHILY TIMONEY

DESIGNING AND DELIVERING
A SUSTAINABLE FUTURE

www.fehilytimoney.ie