FEHILY TIMONEY
30 YEARS

CONSULTANTS IN ENGINEERING, ENVIRONMENTAL SCIENCE & PLANNING

ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR) FOR THE PROPOSED COOM GREEN ENERGY PARK, COUNTY CORK

VOLUME 2 – MAIN EIAR

CHAPTER 1 - INTRODUCTION

Prepared for: Coom Green Energy Park Limited

coom green energy

Date: December 2020

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1. INTRODUCTION

Fehily Timoney & Company (FT) has prepared this environmental impact assessment report (EIAR) on behalf of Coom Green Energy Park Limited, a joint venture company between Brookfield Renewable Ireland Limited (BRIL) and Coillte Cuideachta Ghníomhaíochta Ainmnithe (Coillte). Coom Green Energy Park Limited intends to apply to An Bord Pleanála for planning permission to construct the proposed Coom Green Energy Park (CGEP) in County Cork. The location of the development is shown on Figure 1.1.

The proposed turbines are located in proximity to the Bottlehill Landfill site approximately 12km south east of Mallow, and at the Nagles Mountains, approximately 5km south west of Ballyhooly, County Cork. The proposed CGEP site includes lands contained within the following townlands: Glashaboy North, Coom (Hudson), Tooreen South, Killeagh, Coom (Fitzgerald), Knuttery, Mullenaboree, Knockacullata, Knoppoge, Carrig, Glannasack, Knockdoorty, Lackendarragh North, Glashaboy South and Toorgarrif County Cork.

Temporary accommodation works to facilitate turbine deliveries are proposed at lands contained within the following townlands: Grange West, Ballyhooly South, Glashaboy South and Castleblagh, Shanacloon, Grange east, Castlehyde, Gortroche, Ballygrogan, Slievedotia, Tooreen South and Carrignagohera, Co. Cork.

The underground grid route connecting the wind farm to the national grid at Barrymore substation traverses the following townlands; Knockacullata, Tooreen, Commons, Knoppoge, Carrig, Killeagh, Glannasack, Knockdoorty, Lackendarragh North, Moanlahan, Knockauncorrin, Mullentaura, Glanakip, Rathcormack-mountain, Coolnakilla, Knockananig, Coolmucky, Ballynahina, Corrin, Farran North, Farran South, Kill-Saint-Anne-North, Co. Cork.

The proposed grid connection to the national grid is considered as part of the assessment in this EIAR but does not form part of this application for consent.

1.1 Applicant

The applicant for permission is Coom Green Energy Park Limited, a 50/50 joint venture company between Brookfield Renewable Ireland Limited (BRIL) and Coillte Cuideachta Ghníomhaíochta Ainmnithe (Coillte).

Brookfield Renewable operates one of the world's largest publicly traded, renewable power platforms with hydroelectric, solar, wind and storage facilities in Europe, North America, Latin America and Asia. The company operates more than 17,000 megawatts (MW) of installed capacity. In 2014, Brookfield Renewable added one of the largest renewable energy portfolios on the island of Ireland to its platform. The Irish business today consists of more than 400 megawatts of operating wind capacity across 23 wind farms in 10 counties and employs approximately 120 people from its European operating headquarters in Cork.

Coillte manages approximately 7% of Ireland's land and operates three businesses with the core business being commercial forestry. Coillte is responsible for harnessing the wind energy in the vicinity of Coillte forests and aims to build responsible projects that are good for the environment, for Irish society and positively benefit the neighbouring community. Coillte has now been involved in the development of 4 operational wind farms on their lands with a capacity of 240 megawatts in conjunction with 3 joint venture partners and has an aspiration to develop a further 1 gigawatt (GW) over the next ten years.

1.2 Outline of the Proposed Development

The proposed project consists of four main elements:

- Coom Green Energy Park (CGEP);
- Turbine delivery route (TDR);
- Grid connection route (GCR);
- Replant Lands.

The proposed CGEP will consist of a wind farm of up to 22 no. wind turbine generators (WTG's), up to 2 no. substation compounds and a battery storage unit along with ancillary civil and electrical infrastructure.

The proposed WTG's will have a maximum tip height of up to 169m above existing ground level, and a maximum rotor diameter of up to 138m. The final choice of turbine model will be dictated by the energy production efficiencies of various turbines on the market at the time of the turbine procurement stage but will not exceed the maximum size envelope set out within the development description. The consideration of environmental impacts of the proposed development throughout the EIAR is based on the largest possible size of development i.e. assessment of the worst-case scenario; that is, the design envelope parameters that would produce the greatest potential impact. For example, modelling for bird collision risk was carried out based on a turbine with the maximum rotor diameter of 138m and the maximum tip height of 169m. The exact combination of rotor diameter and hub height will be dictated by the final selection of the turbine make and model at turbine selection stage/pre-construction but will in any case comply with the environmental impact limits set out in this EIAR.

The associated grid connection route (GCR) will consist entirely of underground cable and will connect the on-site substations to an existing 110kV substation at Barrymore, within the townland of Farran South near Rathcormac. The GCR will be ca.24.4km in length, with ca. 16.7km to be constructed within the existing road corridor. The 110kV grid connection cable will follow public roads and shall feature horizontal directional drilling (HDD) at up to 4 no. locations to cross existing watercourses and the M8 motorway.

It is expected that large components associated with the wind farm construction will be transported to site via two separate turbine delivery routes (TDRs), the West TDR and the East TDR.

The West TDR will approach from the N20 to the west of the site and shall enter the site via an existing Coillte forestry access located north of Bottle Hill in the townland of Tooreen South. A turning point is required for turbine delivery prior to entering the site. This will be accommodated in an existing Coillte forestry area in the townland of Glashaboy South. Components for 15 no. WTG's will be delivered to site via this route. The East TDR shall come from the M8 motorway at Junction 14 and approach the site from the east along the N72 via Fermoy, Castlehyde and Ballyhooly, entering the site at an existing forestry access which will be upgraded as part of the development. Components for 7 no. WTG's will be delivered to site via this route.

Battery energy storage system (BESS) units, to facilitate on site energy storage and to provide ancillary services to the electricity grid, will be situated next to the main onsite substation compound at Lackendarragh. They will be housed in glass reinforced plastic (GRP) units or modified shipping containers.

The proposed grid connection to the national grid at Barrymore substation proposed on the public road is considered as part of the project's assessment in this EIAR but does not form part of this application for consent. Equally an environmental assessment has been carried out for replant lands at Moneygorm, Co. Cork and Ballard, Co. Wicklow which are also not included in the application for consent.

The lands at Moneygorm and Ballard form part of the overall project and relate to replant lands and these have been assessed in detail in Appendix 3.3 of this EIAR but are considered cumulatively with other elements of the wind farm project in this section.

In addition to the above works, biodiversity lands have been identified and shall be managed throughout the life of the proposed development under a Conservation and Habitat Management Plan. This can be found in Appendix 8-K of this EIAR.

Therefore, the development description as per the newspaper notice and the application form for which consent from An Bord Pleanála is being sought is as follows:

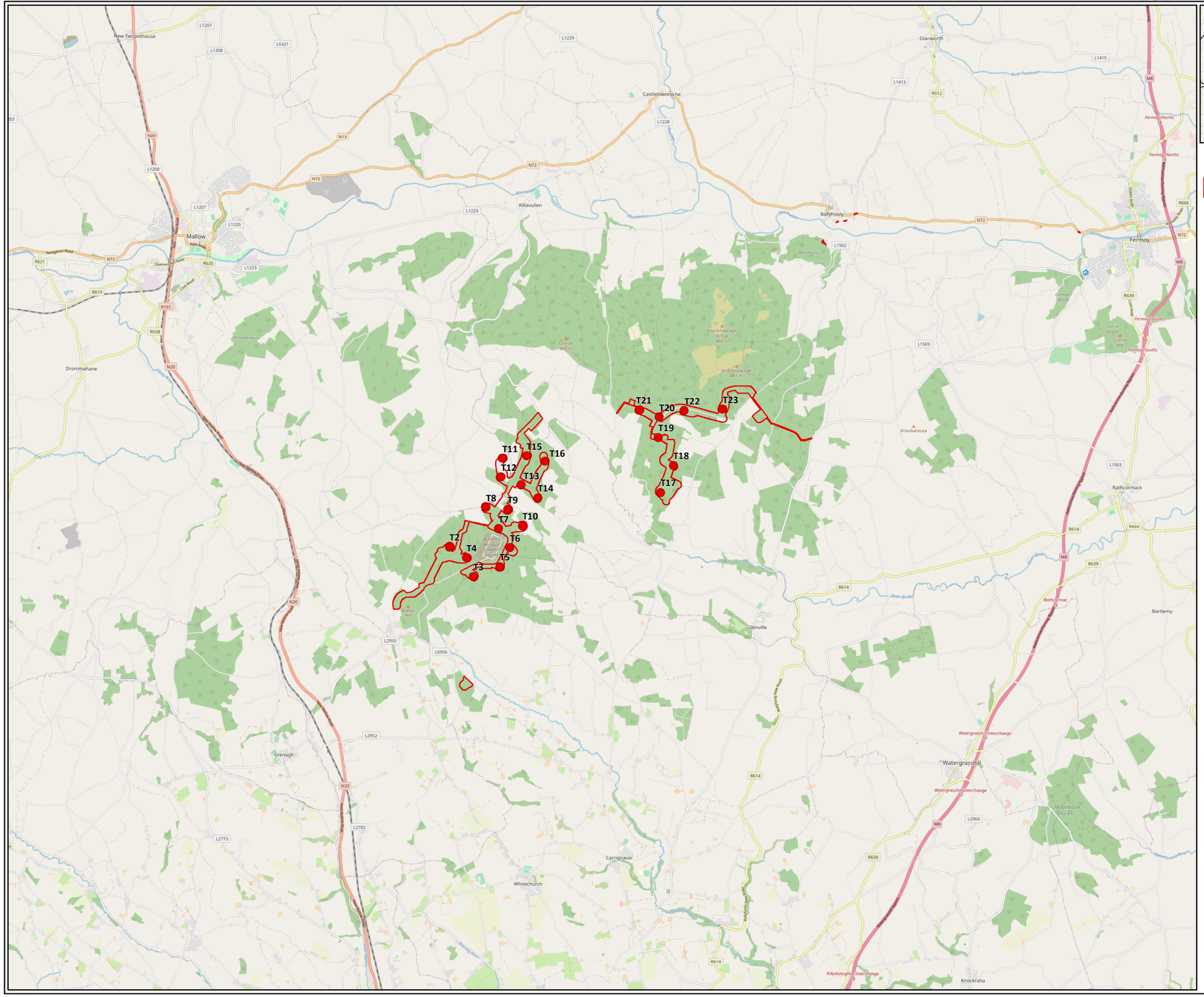
In accordance with section 37E of the Planning and Development Act 2000, as amended, Coom Green Energy Park Limited seeks permission for a period of 10 years, for development consisting the construction of a wind farm and related works within the townlands Glashaboy North, Coom (Hudson), Tooreen South, Killeagh, Coom (Fitzgerald) , Knuttery, Mullenaboree, Knockacullata, Knoppoge, Carrig, Glannasack, Knockdoorty, Lackendarragh North, Glashaboy South, Toorgarrif, Castleblagh, Ballyhooly South and Grange West, County Cork. The development will consist of:

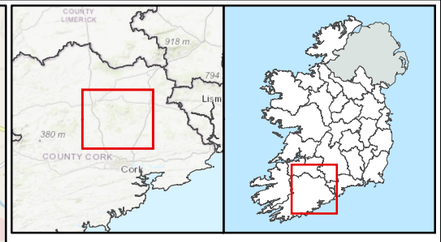
- The construction of up to 22 no. wind turbines with a maximum tip height of 169 m and a maximum rotor diameter of 138 m and ancillary works including hardstanding areas;
- Upgrade of existing site tracks and the construction of new site tracks and associated drainage infrastructure both permanent and temporary;
- 3 no. on site borrow pits and associated ancillary infrastructure within the townlands of Tooreen South, Mullenaboree and Lackendarragh North;
- Construction of up to 2 no. onsite electrical substations including control buildings and electrical plant and equipment, a battery energy storage facility, welfare facilities, carparking and waste water holding tanks within the townlands of Knockacullata and Lackendarragh North;
- 3 no. Temporary construction site compounds and associated ancillary infrastructure including parking within the townlands of Tooreen South, Knockdoorty and Lackendarragh North;
- All associated underground electrical and communications cabling within private lands connecting the wind turbines to the 2no. proposed on-site substation;
- Upgrade of existing access junctions for temporary construction access from the local roads, L-1219-0 and L-1501 within the townlands of Tooreen South and Lackendarragh North;
- Permanent access junctions; from the local road L-1219-0 within the townland of Tooreen South, and from the local road L-1501 within the townland of Lackendarragh North.
- Erection of 2no. permanent meteorological masts with a maximum height of 100 m for the measuring of metrological conditions within the townlands of Tooreen South and Knoppoge;
- Temporary accommodation works at 6 no. locations to facilitate delivery of abnormal loads on the public road within the townlands of Grange West, Castlehyde, Ballyhooly South, Glashaboy South and Castleblagh. These works will primarily relate to the cutting back of hedgerows and lowering of boundary walls and the temporary installation of hardcore including an off-site turning area;

- All related site works and ancillary development including landscaping and drainage;
- A 10 year planning permission and 30 year operational life from the date of commissioning of the entire wind farm.

In addition to the above works, biodiversity lands have been identified and shall be managed throughout the life of the proposed development under a Habitat & Species Management Plan.

Path: R:\Map Production\2020\P20-099\Workspace\CEMP\P20-099_GIS_Fig1-1_SiteLocation_A3.mxd





Proposed Turbine Layout

Proposed Development Boundary

TITLE: Site Location			
PROJECT: Coom Green Energy Park, Co. Cork			
FIGURE NO:	1.1		
CLIENT:	Coom Green Energy Park Ltd.		
SCALE:	1:100000	**REVISION:**	0
DATE:	03/10/2020	**PAGE SIZE:**	A3

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1.3 Application and EIAR Requirement

1.3.1 Strategic Infrastructure Development Planning Process

The Planning and Development Act 2000 was amended in 2006 to require certain applications for permission for major infrastructure projects to be made directly to An Bord Pleanála, rather than to the local planning authority, as would have previously been the case.

In December 2018, Brookfield Renewable Ireland Limited (BRIL) and Coillte wrote to An Bord Pleanála to formally request a pre-application consultation meeting under Section 37B of the Planning and Development Act 2000, as amended ("the 2000 Act"), in respect of the proposed Coom Green Energy Park (CGEP).

In order to commence the pre-application consultation required under section 37B, a proposed development must fall within of a class specified in the Seventh Schedule to the 2000 Act. Part 1 of the Seventh Schedule, 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."*

Thereafter, the Board must satisfy itself that the proposed development meets one or more of the conditions set out in subsection 37A(2) of the 2000 Act, namely—

> *"(a) the development would be of strategic economic or social importance to the State or the region in which it would be situate,*
>
> *(b) the development would contribute substantially to the fulfilment of any of the objectives in the National Spatial Strategy or in any regional spatial and economic strategy in force in respect of the area or areas in which it would be situate,*
>
> *(c) the development would have a significant effect on the area of more than one planning authority."*

Following pre-application consultations held on 5th June 2019, and 7th August 2019, An Bord Pleanála issued a notice to BRIL and Coillte on 1st November 2019 (under Ref. No. PL04.303322) indicating its determination that the proposed development is SID in accordance with the provisions of section 37A of the 2000 Act and, accordingly, an application for permission should be made directly to An Bord Pleanála. Consequently, this EIAR is submitted with an application for consent made directly to An Bord Pleanála, in accordance with the requirements of Section 37E of the Planning and Development Act 2000, as amended.

Correspondence and detail relating to the pre-application consultation process undertaken are included in Appendix 5.3 of Volume 3 of this EIAR.

1.3.2 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 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 and Development Regulations 2001 (as amended) and Directive 2014/52/EU.

1.3.3 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 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 An Bord Pleanála 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 (in this case, An Bord Pleanála) 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 Coom Green Energy Park, an Appropriate Assessment Screening Report and Natura Impact Statement have been prepared and submitted to An Bord Pleanála with this application for permission.

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 and the mitigation measures proposed.

Article 3 of the 2014 EIA Directive 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)"

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 the most significant impacts and the areas of key concern 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 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 having regard to the guidance set out in the following:

- *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, Draft, 2017)*
- *Advice Notes for Preparing Environmental Impact Statements (EPA, Draft 2015)*
- *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.*

Firstly, the planning context, the background to the project and the proposed development is described. 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.

Approach to the Wind Energy Development Guidelines

The CGEP project has been designed, sited and assessed in compliance with the Wind Energy Development Guidelines (2006), the guidelines in force at the time of preparation of the CGEP project design and EIAR. We note that the Draft Revised Wind Energy Development Guidelines (2019) is currently at draft stage and has not yet been formally adopted by the government. However, the design and assessment of the CGEP project has had regard to the draft guidelines and has provided for key elements as set out in the guidelines such as:

- A minimum setback distance of four times the tip height to the nearest point of residential properties.
- A policy of zero shadow flicker at nearby existing dwellings or other affected properties. This is detailed in Chapter 12 – Shadow Flicker.
- Revised noise limits as detailed in Chapter 7 – Noise and Vibration.
- Provision of an underground grid connection.

The design and siting of the CGEP has taken account of the Draft Revised Wind Energy Development Guidelines and it is considered that the CGEP is in compliance with the key elements of the Draft Wind Energy Development Guidelines, as well as the Wind Energy Development Guidelines (2006).

1.4.2 EIAR Structure

The EIAR has been prepared using the "grouped format structure" as outlined in EPA guidance documents (EPA, 2002; EPA, 2003) and in line with the draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (2017). 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.

Given the scale of the proposed Coom Green Energy Park and consciousness of the need to ensure that the EIAR is readily accessible to the general public, as well as the statutory authorities, the EIAR team has structured the EIAR as described below.

The EIAR consists of the following chapters:

- Chapter 1 - Introduction
- Chapter 2 - Need for the Development and Alternatives Considered
- Chapter 3 - Description of the Proposed Development
- Chapter 4 - Policy
- Chapter 5 - EIA Scoping, Consultation and Key Issues
- Chapter 6 - Air Quality and Climate Change
- 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 structure proposed for the EIAR is 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 a Planning Report and Planning Drawings.

1.4.3 Cumulative Impact

The potential cumulative impact of the Project has been assessed in line with Annex IV of the EIA Directive 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 in combination 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.

Assessment material for this cumulative impact appraisal was compiled on relevant developments within the vicinity of the Coom Green Energy Park project, including the length of the proposed grid connection route.

The material was gathered through a search of relevant County Council's Online Planning Registers, reviews of relevant EIA documents, planning application details and planning drawings, which served to identify past and future projects, 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. Projects identified for cumulative assessment are set out in Appendix 1.2 of Volume 3 of this EIAR.

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 EIAR for the proposed development, as well as preparing the application for consent to An Bord Pleanála.

Specialist and competent contributors involved in the preparation of the EIAR are outlined in Table 1.1 over.

Curricula Vitae (CVs) of contributors are presented in Appendix 1.1 of Volume 3 of this EIAR. Each CV demonstrates the experience and expertise of each respective contributor. .

Table 1-1: Contributors to the EIAR

EIAR Topic	Company	Name and Qualifications
Chapter 1 – Introduction	FT	Eamon Hutton, BSc, MSc, MIPI
Chapter 2 - Need for the Development and Alternatives Considered	FT	David Moore, BA, MA, MBA, MSc, MIPI
Chapter 3 – Description of the Development	FT	Trevor Byrne, BSc, MSc, MIEI
Chapter 4 – Policy	FT	Jim Hughes, BA, EIA/SEA Dip, MSc
Chapter 5 – EIA Scoping, Consultation and Key Issues	FT	Eamon Hutton, BSc, MSc
Chapter 6 – Air Quality and Climate	FT	Dr. Elaine Bennett, BSc, PhD Donna O' Halloran, Dip Hort., BSc Agr., MSc (Agr) ERM, MSc Ecology; Crystal Leiker, BSoc.Sc., MPlan
Chapter 7 – Noise and Vibration	FT	Dr. John Mahon, PhD BA BAI, MIEI, MIOA
Chapter 8 – Biodiversity	Inis Environmental Consultants	Donncha Ó Catháin, BSc, MSc Howard Williams, BSc CEnv MCIEEM CBiol MRSB MIFM Joao Martins, BE, MSc Roger MacNaughton B.Sc (Hons), M.Sc, MCIEEM Dr. Alex Copland, BSc, PhD Jon Kearney (FT) BSc Applied Ecology; MSc Ecology Nick Marchant BSc, MSc Pascal Sweeny Ross Macklin PhD (candidate), B.Sc. (Hons) MCIEEM., MIFM, HDip GIS, PDip IPM
Chapter 9 – Land, Soil & Geology	FT	Tom Clayton, MEng, CEng Ian Higgins, BSc, MSc
Chapter 10 – Hydrology and Water Quality	FT	Trevor Byrne, BSc, MSc, MIEI Kristian Divjak MSc, B.Eng
Chapter 11 – Population, Human Health & Material Assets	FT	David Moore, BA, MA, MBA, MSc, MIPI
Chapter 12 – Shadow Flicker	TNEI Services Ltd	Mark Tideswell, BSc, Dip, AMIOA Jim Singleton, BSc, Dip, AMIOA
Chapter 13 – Traffic and Transportation	FT	Trevor Byrne, BSc, MSc, MIEI
Chapter 14 Archaeology, Architectural and Cultural Heritage	John Cronin & Associates	John Cronin, BA, MRUP, MUBC Tony Cummins, BA, MA
Chapter 15 – Landscape and Visual	Macro Works	Richard Barker BA PG Dip MLA Cian Doughan BSc

EIAR Topic	Company	Name and Qualifications
Chapter 16 – Telecommunications and Aviation	FT	Dr. Elaine Bennett, BSc, PhD Crystal Leiker, BSoc.Sc., MPlan
Chapter 17 – Interactions of the Foregoing	FT	David Moore, BA, MA, MBA, MSc, MIPI

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 turbine is approximately 30 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'*

Furthermore, the Draft Revised Wind Energy Development Guidelines (2019) states that current technology would suggest that a time limit of approximately 30 years is reasonable. In this respect, the applicant requests the grant of permission is on the basis of a 30-year operational period from the date of commissioning of the wind farm.

1.7 Difficulties Encountered

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

1.8 Viewing and Purchasing of the EIAR

This EIAR is available for download at www.coomgreenenergy.com.

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 the following locations:

- The Offices of An Bord Pleanála, 64 Marlborough Street, Dublin 1.
- Cork County Council Planning Department, Ground Floor, County Hall, Carrigrohane Road, Cork.

1.9 References

The Department of the Environment, Heritage and Local Government (2006), Wind Energy Development Guidelines. Available at: https://www.housing.gov.ie/sites/default/files/migrated-files/en/Publications/DevelopmentandHousing/Planning/FileDownLoad%2C1633%2Cen.pdf

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

EPA (2017), Guidelines on the Information to be contained in Environmental Impact Assessment Reports. Available from: https://www.epa.ie/pubs/advice/ea/EPA%20EIAR%20Guidelines.pdf

EPA (2015), Advice Notes for Preparing Environmental Impact Statements. Available at: https://www.epa.ie/pubs/consultation/reviewofdrafteisguidelinesadvicenotes/Draft%20Advice%20Notes%20for%20preparing%20an%20EIS.pdf

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.housing.gov.ie/sites/default/files/publications/files/guidelines_for_planning_authorities_and_an_bord_pleanala_on_carrying_out_eia_-_august_2018.pdf

Department of Housing, Planning and Local Government (2019), Draft Revised Wind Energy Development Guidelines. Available at: https://www.housing.gov.ie/sites/default/files/public-consultation/files/draft_revised_wind_energy_development_guidelines_december_2019.pdf

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 (2000-2019), Planning and Development Acts 2000-2019. Available at: http://revisedacts.lawreform.ie/eli/2000/act/30/revised/en/html

Government of Ireland (2001-2019), Planning and Development Regulations 2001-2019. Available at: https://www.housing.gov.ie/sites/default/files/legislations/planning_and_development_regulations_2001_-_2019unofficial_consolidationannotated12.11.19.pdf

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