

ENVIRONMENTAL IMPACT ASSESSMENT REPORT (EIAR) FOR THE PROPOSED COOM GREEN ENERGY PARK GRID CONNECTION

VOLUME 2 - MAIN EIAR

CHAPTER - 1 INTRODUCTION

Prepared for:

Coom Green Energy Park Limited



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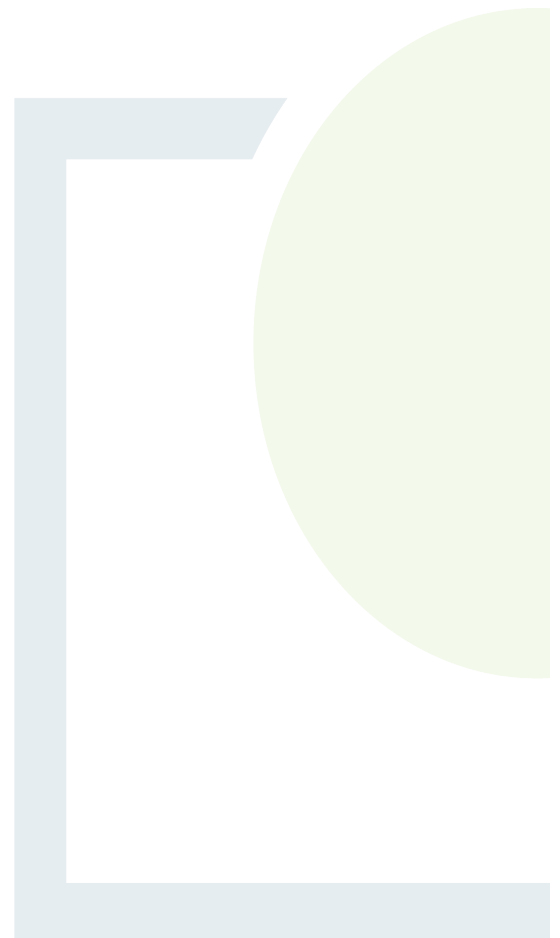


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1. INTRODUCTION

Fehily Timoney and Company (FT) has prepared this Environmental Impact Assessment Report (EIAR) on behalf of Coom Green Energy Park Limited. Coom Green Energy Park Limited intend to apply for planning permission to construct a 110kV Grid Connection Route, a 33 kV Collector Network Route, and a 110kV Substation associated with the consented Green Energy Park (CGEP) energy development within the jurisdiction of Cork County Council, approximately 12 km to the southeast of Mallow and approximately 13 km west of Fermoy in County Cork.

A full description of the Proposed Development is provided in Volume 2, Chapter 2 – Development Description of this EIAR which should be read in conjunction with the figures presented in Volume 4 and the following Appendix documents provided in Volume 3 of the EIAR:

- Appendix 1.1: Contributors to the EIAR;
- Appendix 1.2: Glossary of Terms and Abbreviations;
- Appendix 1.3: List of Developments for Cumulative Assessment.

This EIAR takes into account the project as a whole, and all direct and indirect effects, the cumulative effects and their interactions, including all relevant ancillary and subsidiary elements of the overall development. The objective of this EIAR is to provide information on the likely significant environmental effects associated with the Proposed Development to enable the competent authority to undertake an Environmental Impact Assessment.

1.1 Applicant

The application for the Proposed Development of Coom Green Energy Park Grid Connection is being made by Coom Green Energy Park Limited. Coom Green Energy Park Limited is a 50/50 joint venture company between Orsted and FuturEnergy Ireland.

Orsted is a multinational renewable energy company that develops, acquires, builds and operates utility-scale wind, solar power, bioenergy, renewable hydrogen and other green fuel projects.

FuturEnergy Ireland is a joint venture company between Coillte and ESB. As custodian of 7% of Ireland's land, Coillte plays a critical role in tackling climate change through the active management of its land and forest resources and the manufacture of sustainable forest products. ESB, through its Brighter Future strategy, is furthering its investment in and commitment to onshore wind generation in Ireland, one of the main technologies underpinning the clean electricity systems that will power our societies into the future.



1.2 Brief Description of the Proposed Development

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

- A 110 kV Underground Cable (UGC) Grid Connection Route from the proposed onsite substation at Lackendarragh to the existing Barrymore 110 kV substation located near Rathcormac, Co. Cork (also referred to herein as the '110 kV GCR');
- A 33kV Underground Cable (UGC) Collector Network Route between the western and eastern arrays of the permitted Coom Green Energy Park (CGEP) development (also referred to herein as the '33 kV CNR');
- A 110kV onsite substation at Lackendarragh, in line with the latest Eirgrid functional specifications (also referred to herein as '110 kV Substation').
- All associated infrastructure, services and site works including excavation, earthworks, soil management, forestry felling, drainage and sediment control to facilitate the works.

The Proposed Development location is outlined below, and is described in detail in Volume 2, Chapter 2 - Development Description. The Proposed Development is located within the jurisdiction of Cork County Council.

Coom Green Energy Park (CGEP) is a permitted development (ACP Ref: 308885) consisting of a 22 no. turbine wind farm, 110 kV substation, 20 no. battery energy storage containers and all associated ancillary works. Two 110 kV substations were permitted as part of the CGEP, one in the townland of Mullenaboree and one in the townland of Lackendarragh North. However, only the substation located in Lackendarragh North will be constructed. The permitted 110 kV substation at Mullenaboree shall not be constructed if the Proposed Development receives planning consent, as it will no longer be required.

The permitted CGEP is located approximately 12 km to the southeast of Mallow and approximately 13 km west of Fermoy in County Cork.

The 110kV GCR traverses the following townlands: Lackendarragh North, Moanlahan, Knockauncorin, Mullentaura, Glanakip, Rathcormack-mountain, Coolnakilla, Knockananig, Coolmucky, Ballynahina, Corrin, Farran North, Farran South, Kill-Saint-Anne-North, Co. Cork.

The 33kV CNR traverses the following townlands: Coom (Hudson), Mullenaboree, Knockaunalour, Knocknacaheragh, Chimneyfield, Killeagh, Glannasack, Knockdoorty and Lackendarragh North, Co. Cork.

The 110kV onsite substation is located at Lackendarragh North, Co. Cork.

The Proposed Development application area (i.e. the red line boundary depicting the land to which the application relates, which includes the 110 kV GCR, 33kV CNR and the 110kV onsite substation) comprises a land area of 57.6 ha (0.58 km²) and is shown in planning application drawings submitted with the application.

The works area associated with the 110 UGC and 33 kV CNR shall take place within an approximate 20 m corridor through private lands.

All works associated with the 110 kV UGC and 33 kV CNR within public roads shall be carried out within the boundaries of the public road corridor as shown on planning application drawings.

The development boundary associated with the 110 kV substation at Lackendarragh North is not proposing to change from that associated with the permitted CGEP development.



1.2.1 Permission Period

A permanent planning permission is being sought for the Proposed Development. A 30-year operational permission is being sought for the 33kV CNR.

The onsite 110kV substation and 110kV GCR will be taken in charge by ESBN / EirGrid upon completion of construction and shall be left in place forming part of the national electricity network and so should not have a conditioned limit to its operational life.

1.3 Alternatives to the Proposed Development

The requirement in relation to alternatives in the EIA process is set out in Directive 2011/92/EU, amended by Directive 2014/52/EU, in Article 5 (1)(d), which states that an EIAR should include:

“a description of the reasonable alternatives studied by the developer, which are relevant to the project and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the project on the environment”

Article 5(1)(f) of the EIA Directive requires that the EIAR contains “any additional information specified in Annex IV relevant to the specific characteristics of a particular project or type of project and to the environmental features likely to be affected.”

The reasonable alternatives examined by the Applicant, which are relevant to the Proposed Development and its specific characteristics, including the site selection process, alternative design philosophies, alternative site layouts, the do-nothing alternative are set out in Volume 2, Chapter 3 - Site Selection and Alternatives.

1.4 Need for the Proposed Development

The Proposed Development is required for the construction and operation of the consented CGEP (ACP Ref: 308885), consisting of a 22 no. turbine wind farm, 110 kV substation, 20 no. battery energy storage containers and all associated ancillary works. Therefore, should the Proposed Development not go ahead, the consented CGEP and its associated benefits including renewable energy production would not be realised. CGEP will have a total Maximum Export Capacity (MEC) of approximately 105 MW and represents a necessary addition of the production of renewable energy for the Irish national grid, in order to transition Ireland to a low carbon economy.

At a strategic level, the need for the Proposed Development is supported by International, European, National and Regional environmental and energy commitments and policies. In Volume 2, Chapter 4: Policy of this EIAR, a detailed analysis of these commitments and policies is outlined. This is in the context of substantial and continuing failure by Ireland in meeting climate targets to date, as copper fastened in the EPA's Greenhouse Gas (GHG) emissions projections as described in "Ireland's Greenhouse Gas Emissions Projections 2023-2050", published in May 2024. This report indicates that Ireland will fall short of its climate targets. Despite this, increased renewable energy generation, from wind and solar, if delivered as planned in the Climate Action Plan 2024 (CAP24), can reduce Energy Industry emissions by 60 per cent and achieve over 80 per cent renewable electricity generation by 2030.



The Government published Climate Action Plan 2024 (CAP24) on 20th December 2023, this was the third updated action plan following on from the inaugural plan of 2019 which was a result of the Irish Government declaring a climate and biodiversity emergency on 9th May 2019. As of April 2025, Climate Action Plan 2025 (CAP25) has been published, with the government's website stipulating that CAP25 is to be read in conjunction with CAP24. The CAP provides a framework for delivering the Government's target of a 51% reduction (relative to 2018) in Greenhouse Gas (GHG) emissions by 2030. CAP24 follows the Climate Action and Low Carbon Development (Amendment) Act 2021, which commits Ireland to a legally binding target of net zero greenhouse gas emissions no later than 2050, and a reduction of 51% by 2030.

1.4.1 Climate Change

The scientific community and governments across the world are in agreement that the global climate is changing at an unnatural rate. This is due to human activities, which have significantly contributed to natural climate change through our emissions of greenhouse gases. This interference is resulting in increased air and ocean temperatures, drought, melting ice and snow, rising sea levels, increased rainfall, flooding and other influences.

On the launch of the Climate Action and Low Carbon Development (Amendment) Bill (2021), the current Taoiseach, Michéal Martin, remarked at the time:

“The impact of our actions on the planet is undeniable. The science is undisputed. Climate change is happening, and we must act.” (Government of Ireland, 2020)

The CAP provides a framework for delivering the Government's target of a 51% reduction (relative to 2018) in greenhouse gas (GHG) emissions by 2030. CAP24 follows the Climate Action and Low Carbon Development (Amendment) Act 2021, which commits Ireland to a legally binding target of net zero greenhouse gas emissions no later than 2050, and a reduction of 51% by 2030. The Act provides a governance framework for annual revisions of the Climate Action Plan and the development of a National Long-Term Climate Action Strategy at least once every ten years. As part of this plan, the Government is also committed to reducing emissions by an average 7% per annum by 2030. The CAP is underpinned by a series of sectoral emissions reduction ambitions and enabling actions, with a selection of relevant actions that are relevant to the Proposed Development, as outlined below. CAP25, published in April 2025, reiterates many of these objectives outlined in CAP24, including the need to double Ireland's onshore wind energy capacity to 9 GW by 2030 in order to meet new renewable energy targets and reduce emissions.

The Proposed Development will facilitate the CGEP and the delivery of the CGEP's associated estimated Export Capacity (MEC) to the national grid. The completed CGEP will have an estimated MEC of approximately 105MW to be delivered to the national grid. This will result in the net displacement of 137,371 tonnes of CO₂ per annum. The Proposed Development will facilitate this significant increase in indigenous renewable energy generation, allowing Ireland to become less reliant on imported fossil fuel and bolstering Ireland's energy security.

The Proposed Development will further assist in mitigating the effects of climate breakdown, and help Ireland achieve its climate neutral economy, by no later than 2050, as within the 'National Climate Objectives', as set out in the Climate Action and Low Carbon Development (Amendment) Act 2021.

1.4.2 EU Renewable Energy Targets and National Policy

As further detailed in Volume 2, Chapter 4 - Policy of this EIAR, Ireland has adopted binding agreements to reduce dependency on fossil fuels and increase energy production from sustainable sources, creating a requirement for the nation to transition to a low carbon economy.



These policies are supported by the latest Programme for Government (2025), titled ‘Securing Ireland’s Future’, which presents strong climate governance in rapidly reducing climate change in order to protect and improve public health and quality of life, and has identified wind energy as having a crucial role to play in achieving this. The government are committed to rapid decarbonisation of the energy sector, with an aim of providing the necessary actions to deliver national renewable electricity targets. These government ambitions support the ongoing generation of renewable energy from onshore wind sources, where they state the following commitments:

- To achieve 80% renewable electricity by 2030;
- Deliver 9 GW of onshore wind by 2030;
- Hold at least one RESS auction per year;
- Prioritizing and increase investment in the electricity grid;
- Develop a policy to address repowering and extend the life of existing onshore wind farms.

The 2030 Climate and Energy Framework (European Commission, 2014) adopted by the EU sets out a framework for the long-term perspective beyond 2020 targets. The 2030 Climate and Energy Framework sets out three key targets for the year 2030:

- At least 40% cuts in greenhouse gas emissions (from 1990 levels);
- At least 32% share of renewable energy;
- At least 32.5% improvement in energy efficiency.

Further to this, in 2016, the European Commission published its 2030 emissions targets break down for each Member State. While the overall EU target is a reduction of 40% on 1990 greenhouse gas emissions by 2030, every Member State negotiates an individual target. Ireland will have to reduce its emissions by 30% relative to its 2005 emissions.

The 2050 “Roadmap for a competitive low-carbon Europe” (European Commission, 2011) suggests that by 2050, the EU should cut greenhouse gas emissions to 80% below 1990 levels. This would require 40% emissions cuts by 2030 and 60% by 2040. This is in line with EU leaders’ commitment to reducing emissions by 80-95% by 2050. Ireland is likely to face equivalent mandatory targets from the EU.

Ireland adopted these targets into the Climate Action Plan 2024 (CAP24) which sets out an objective to more than double Ireland’s onshore wind energy capacity to 9 GW by 2030, in order to meet new renewable energy targets, and reduce emissions. In 2024, The Commission approved planning permission for 10 new wind farms with a combined capacity of 717 MW. This equates to c. 42% of wind energy needed to meet the target. Therefore, there is a clear national mandate to accommodate significant onshore wind within the next decade, with c. 1,720 MW of additional wind energy required each year for Ireland to achieve wind energy capacity of 9 GW by 2030.

The binding EU targets have been transposed into Irish National Policy in the Climate Action Plan 2025 (CAP 25), which focuses a large amount of future electricity production on the wind energy sector. This demonstrates the significance of wind energy in the Irish energy context and highlights the need for the Proposed Development in reaching both EU and national renewable energy targets.



1.4.3 Energy Security

Secure supplies of energy are essential for Ireland’s economy and for maintaining safe and comfortable living conditions. Energy import dependency is a significant indicator of the country’s energy security. Ireland is one of the most energy import-dependent countries in the European Union, with the SEAI ‘Technical Highlights of Interim 2024 National Energy Balance’ showing Ireland importing 79.7% of its fuel in 2024, up from 78.3% in 2023, with the EU average being 58.3%. In 2024, Ireland imported 100% of its oil, 79.5% of its gas, and 14.0% of its electricity. Import dependency has increased steadily since 2018 as the output from the Corrib gas field continues to decline.

Price volatility of fossil fuels may increase as carbon prices escalate in the future. The cost of carbon credits is included in all electricity trade, and the price of electricity generated by coal is particularly vulnerable due to the high carbon emissions per unit of electricity generated. Though the use of coal is declining, coal still generates a significant amount of Ireland’s electricity with 3.3% of electricity produced by coal in 2023 (EPA, 2024), down from 7.7% in 2021 (SEAI, 2022). Gas imports increased due to the decline in production of the Corrib gas field, with 79.5% of Ireland’s gas imported in 2024 (SEAI, 2024).

The Energy White Paper, Ireland's Transition to a Low Carbon Energy Future 2015-2030 (DoCENR, 2015), sets out a framework to guide policy and actions that the government intends to take in the energy sector. The paper notes that:

“There will be substantial increases in the cost of carbon in the short and medium term, through the EU Emissions Trading Scheme”.

The electricity produced by the CGEP, dependent on the Proposed Development, will reduce dependence on imported fossil fuels and add to financial autonomy and energy stability in Ireland, further emphasising the need for the Proposed Development.

Furthermore, the EU have rewritten the energy policy framework in the Clean Energy for all Europeans Package (2019). Member states must meet new commitments to improve energy efficiency and the take-up of renewables in their energy mix by 2030. For example, the new rules on the electricity market, which have been adopted, will make it easier for renewable energy to be integrated into the grid, encourage more inter-connections and cross-border trade, and ensure that the market provides reliable signals for future investment. This EU policy framework encourages energy security for all EU member states, emphasising a need for renewable energy and a move away from fossil fuels.

1.4.4 Competitiveness of Wind Energy and Economic Benefits of the Proposed Development

In addition to helping Ireland reduce environmentally damaging emissions and helping avoid significant fines from the EU, the Proposed Development will also contribute positively to the national and regional economy.

SEAI, in its Interim National Energy Balance 2024, state the following:

“SEAI estimates that emissions from the electricity sector were down by 7.5% on 2023 figures. Although renewable generation capacity increased from 2023, renewables supplied a slightly lower share of Ireland’s electricity than in 2023. This is explained by the increase in electricity demand outpacing the increase in renewable generation, as well as grid constraints and lower wind outputs. The top three sources of electricity in Ireland last year were again natural gas (42.1%), wind (31.7%), and net-imports from interconnectors (14%).”



Additionally, a report published by Baringa in January 2025 states that:

“The development of wind and solar farms has reduced the cost burden on Irish consumers by €840 million between 2000 and 2023. This saving – equivalent to almost €165 per person.... Homegrown renewables have insulated consumers from recent spiralling fuel costs, cutting bills by an average of €320 per person between 2020 and 2023. Low-cost renewable electricity reduced the annual wholesale power price by up to 40 €/MWh, wiping almost €1.7 billion from consumer bills over four years, and easing pressure in a time of cost-of-living challenges. If Ireland continues to invest in wind and solar projects, and achieves the national target of 80% renewable electricity, annual consumer bills could be reduced by €610 million per year.” (Baringa, 2025).

Notwithstanding the above financial costs and benefits, the Baringa report outlines that wind generation in Ireland avoids:

“The renewable transition has avoided more than 47 million tonnes of CO2 between 2000 and 2023, equal to the lifetime emissions of 1.1 million mid-sized cars, 40% of the total vehicles in Ireland. Our study suggests that continued investment in renewables can cut emissions further, with new renewables able to reduce power-sector emissions by more than 8 million tonnes of CO2 in 2030.”

In conclusion, the need for the Proposed Development is a result of the need for action to fight against climate change by reducing consumption of fossil fuels. Ireland has accepted this need in entering into binding renewable energy targets with the European Union with an overall aim to become carbon neutral by 2050. The government has indicated that wind energy will play a key role in providing renewable electricity to the national grid. This will comprise an increase of 9 GW of onshore wind capacity by 2030 (CAP24).

1.5 Requirement for EIAR

Under Section 172 of the Planning and Development Act, 2000 (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. The following are the relevant classes of EIA Development in Part 2 of Schedule 5:

- Class 15 “Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development, but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7”.

The Proposed Development meets the mandatory threshold for EIA. Therefore, an EIAR has been prepared in accordance with the Planning and Development Act 2000 (as amended), and Planning and Development Regulations 2001 (as amended) and Directive 2011/92/EU as amended by Directive 2014/52/EU.

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, the Commission, 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.



1.5.1 Strategic Infrastructure Development (SID)

Subsection 1 of section 182A of the Planning and Development Act 2000 Act¹ states that where an undertaker:

“...intends to carry out development comprising or for the purposes of electricity transmission (hereafter referred to in this section and section 182B as ‘proposed development’), the undertaker shall prepare, or cause to be prepared, an application for approval of the development under section 182B and shall apply to the Board for such approval accordingly.

Subsection 9 of section 182A states that:

In this section ‘transmission’ in relation to electricity, shall be construed in accordance with section 2(1) of the Electricity Regulation Act 1999 but, for the purposes of this section, the foregoing expression, in relation to electricity, shall also be construed as meaning the transport of electricity by means of:

- a) a high voltage line where the voltage would be 110 kilovolts or more, or
- b) an interconnector, whether ownership of the interconnector will be vested in the undertaker or not.

In section 2(1) of the Electricity Regulation Act 1999, “transmission” is defined in relation to electricity as meaning:

“The transport of electricity by means of a transmission system, that is to say a system which consists, wholly or mainly, of high voltage lines and electric plant and which is used for conveying electricity from a generating station to a substation, from one generating station to another, from one substation to another or to or from any interconnector or to final customers, but shall not include any such lines which the Board may, from time to time, with the approval of the Commission, specify as being part of the distribution system, but shall include any interconnector owned by the Board.”

‘Distribution’ is defined as:

“The transport of electricity by means of a distribution system, that is to say, a system which consists of electric lines, electric plant, transformers and switch gear and which is used for conveying electricity to final customers.”

‘Electric Plant’ is defined as:

“any plant, apparatus or appliance used for, or for the purposes connected with, the generation, transmission, distribution, or supply of electricity other than:

- c) an electric line,
- d) a meter used for ascertaining the quantity of electricity supplied to any premises, or
- e) an electrical appliance under the control of a consumer”

¹ Inserted by section 4 of the Planning and Development (Strategic Infrastructure) Act 2006]



Unlike high voltage lines, the legislation is not specific in terms of defining high voltage for substations or electrical plant. Section 182A(9) of the Planning and Development Act, 2000, as inserted by the Planning and Development (Strategic Infrastructure) Act, 2006, sets a threshold of 110 kilovolts in order for a high voltage electricity transmission line to be considered strategic infrastructure.

Whereas no threshold is set for substations, the consented 110kV on-site substation and proposed grid connection infrastructure to the national grid will effectively become a node for 110kV cable lines and will thus form part of the national transmission network.

Once an SID determination request is made by a prospective applicant, The Commission 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, namely:

- the development would be of strategic economic or social importance to the State or the region in which it would be situate,
- the development would contribute substantially to the fulfilment of any of the objectives in the National Planning Framework or in any regional spatial and economic strategy in force in respect of the area or areas in which it would be suitable;
- the development would have a significant effect on the area of more than one planning authority.

1.5.2 Pre-Application Consultation

An SID pre-application consultation meeting was held with An Coimisiún Pleanála on 28 August 2025. This meeting detailed the project background, project scope, and initiated the pre-application consultation process in respect of the Proposed Development.

A second SID pre-application consultation meeting was held with An Coimisiún Pleanála on 14 November 2025. This meeting confirmed the final consenting approach for the Proposed Development.

In a letter dated 18 February 2026, An Coimisiún Pleanála declares the Proposed Development a Strategic Infrastructural Development, falling within the scope of section 182A of the Planning and Development Act 2000. This letter also confirms that the Commission considers that the pre-application consultation process in respect of the Proposed Development is satisfactorily closed.

Pre-application consultation meeting was held with Cork County Council, first through a pre-planning meeting conducted with Cork County Council on 3rd of June 2025. A technical consultation was carried out with the Cork County Council Roads Department on 10th of September 2025. A second pre-planning meeting was held with Cork County Council on 4th of February 2026. A final meeting was had with the Cork County Council Roads Department on the 25th of February 2026.

Further details of technical consultation carried out as part of the EIAR process is contained in Volume 2, Chapter 5 - EIA Scoping and Consultation.

1.6 EIAR Methodology and Structure

The Environmental Impact Assessment Report (EIAR) is a report of the likely significant 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 significant impacts of the project on the environment and the mitigation measures proposed.



Article 3 of the EIA Directive as amended states the following:

“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.

1.6.1 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 effects of the Proposed Development was carried out to identify effects thought to be potentially significant, not significant or uncertain.

Consultation with the relevant private and public agencies ensured that likely significant effects were addressed. Details of the consultation carried out are outlined in Volume 2, Chapter 5: EIA Scoping and Consultation.

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 main 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*
- *European Commission notice: Guidance document on wind energy developments and EU nature legislation (2020).*

The EIAR firstly sets out the planning context, the background to the project, the need for the development, a description of the evolution of the project through the alternatives considered and a description of the proposed development. This sets the reader in context as to the practical and dynamic process undertaken, in order to arrive at the layout and design of the Proposed Development that will seek to reduce 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 effects 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 Effects;
- 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 effects of a proposed development. Existing baseline environmental monitoring data can also be used as a valuable reference for the assessment of actual effects 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.



Likely Significant Effects

In this section, individual specialists predict how the receiving environment will interact with the proposed development. The full extent of the proposed development's likely significant effects and emissions before the proposed mitigation measures are introduced is outlined here. Likely significant effects from the construction, operational and decommissioning phases of the Proposed Development are outlined. Interactions and cumulative effects with other environmental topics and other projects within 20km radius of site, are also included in this evaluation.

The evaluation of the significance of the effect is also undertaken. Where possible, pre-existing standardised criteria for the significance of effects 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 likely significant adverse effects are anticipated, mitigation measures are devised to minimise impacts on the environment. Mitigation measures by avoidance, prevention, reduction and by remedy can be outlined.

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 a post-project analysis).

Residual Effects

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

1.6.2 EIAR Structure

The EIAR has been prepared using the "grouped format structure" as outlined in EPA guidance document (EPA, 2002). 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 likely significant effects, mitigation measures and residual effects 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 – Description of the Development
- Chapter 3 – Site Selection and Alternatives
- Chapter 4 – Planning Policy
- Chapter 5 – EIA Scoping and Consultation
- Chapter 6 – Population and Human Health
- Chapter 7 – Air Quality and Climate
- Chapter 8 – Noise and Vibration
- Chapter 9 – Biodiversity



- Chapter 10 – Soils, Geology and Hydrogeology
- Chapter 11 – Hydrology and Water Quality
- Chapter 12 – Material Assets, Telecommunications, Traffic and Transportation
- Chapter 13 – Archaeology, Architectural and Cultural Heritage
- Chapter 14 – Landscape and Visual
- Chapter 15 – Interactions of the Foregoing

The EIAR is structured as follows:

- Volume 1 – Non-Technical Summary (NTS)
- Volume 2 – Main EIAR
- Volume 3 – Appendices
- Volume 4 – Figures
- Volume 5 – Natura Impact Statement

It should also be noted that a Natura Impact Statement (NIS) has also been submitted with the planning application. This is contained in Volume 5 of the EIAR submission.

The application is also supported by a Planning Statement and a Planning Application Drawing pack.

1.6.3 Cumulative Effects

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

The assessment of projects cumulatively has three principal aims:

1. To establish the range and nature of existing projects within the cumulative effects study area of the Project (which will be topic-specific, e.g. for effects on hydrology the projects located within the same waterbody catchment are considered, for shadow flicker, projects which could have an effect within 10 rotor diameters of the Proposed Development are considered).
2. To summarise the relevant projects which have a potential to create cumulative effects.
3. To establish likely significant cumulative effects. Detailed cumulative impact appraisals are included in each relevant section of the EIAR.

The geographic extent of the cumulative assessment is considered on a case-by-case basis, in line with best practice and the Guidelines for the *Assessment of Indirect and Cumulative Impacts as well as Impact Interactions* (European Commission, 1999).



The material for the cumulative assessment was gathered through a search of relevant County Councils' Online Planning Registers, An Coimisiún Pleanála's 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 The Commission. 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 key feature of the EIAR is the consideration of the consented Coom Green Energy Park (CGEP) development with the Proposed Development. The Proposed Development has been assessed as a standalone project and then assessed cumulatively with the permitted elements of CGEP which assessed by the 2020 EIAR and NIS carried out as part of the planning application for that development.

For example, as described in Chapter 2 - Development Description, the total felling required for the Proposed Development is 17.8 ha. Of this, 10.2 ha of this is already accounted for within the felling area included in the permitted CGEP. The additional felling required arises from the 33kV CNR modifications and the new footprint of the 110kV onsite substation at Lackendarragh North. Conversely, certain areas previously identified for felling under the permitted CGEP are no longer required due to the updated 33kV CNR and the non-requirement of the Mullenaboree substation. Overall, the combined felling required to accommodate both the Proposed Development and the permitted CGEP is 65.2 ha. This represents an additional 2.4 ha compared with the total felling previously calculated in the 2020 EIAR for the permitted CGEP.

The Battery Energy Storage System (BESS) compound does not form part of the Proposed Development. This shall be constructed under the existing CGEP planning permission. The permitted BESS facility has been assessed cumulatively with the Proposed 110 kV Substation and Lackendarragh North described as part of the Proposed Development.

1.7 Scoping and Consultation

The scoping and consultation process was carried out in accordance with the EIA Directive and in accordance with the Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA, 2022). Further details are contained in Volume 2, Chapter 5 - EIA Scoping and Consultation.

1.8 Competent Experts and Quality of the EIAR

Article 5(3) of the EIA Directive states that, in order to ensure the completeness and quality of the EIAR, that:

- a) the developer shall ensure the EIAR is prepared by competent experts;
- b) the competent authority shall ensure that it has, or has access to, sufficient expertise to examine the EIAR, and;
- c) where necessary, the competent authority shall seek from the developer any supplementary information, in accordance with Annex IV (the information to be contained in the EIAR), which is directly relevant to reaching a reasoned conclusion on the significant effects of the project on the environment.

The EPA (2022) 'Guidelines on the information to be contained in Environmental Impact Assessment Reports' notes that the amended Directive does not offer a definition of what would be considered competent expertise, and that the assessment may often require a range of experts to cover the full range of the complexity of an environmental factor.



The list of the experts who have contributed to this EIAR, detailing which parts of the EIAR they have worked on, their qualifications and experience is presented hereunder in order to demonstrate the competency of the team that prepared the EIAR.

1.8.1 Contributors to the EIAR

Fehily Timoney and Company (FT) is a consultancy based in Dublin, Cork and Carlow, 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 The Commission.

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 1.1 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	Ida Wulff, BSc (Hons) International Development, Mplan (Author) Evan Rossiter, BSc City Planning and Environmental Policy, MRUP (Reviewer)
Chapter 2 – Description of the Development	FT	Aoife Hurd, Beng, Meng Civil, Structural and Environmental Engineering (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 3 – Site Selection and Alternatives	FT	Ida Wulff, BSc (Hons) International Development, Mplan (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 4 – Planning Policy	FT	Ida Wulff, BSc (Hons) International Development, Mplan (Author) Evan Rossiter, BSc City Planning and Environmental Policy, MRUP (Reviewer)
Chapter 5 – EIA Scoping and Consultation	FT	Cathal Creedon, BA Geography & History, Mplan (Author) Evan Rossiter, BSc City Planning and Environmental Policy, MRUP (Reviewer)
Chapter 6 – Population and Human Health	FT	Cathal Creedon, BA Geography & History, Mplan (Author) Evan Rossiter, BSc City Planning and Environmental Policy, MRUP (Reviewer) Jim Hughes, BA, EIA/SEA Dip, MSc (Reviewer)
Chapter 7 – Air Quality and Climate	FT	Philip McDowell, BEng, Meng Civil, Structural and Environmental Engineering (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)



EIAR Topic	Company	Name and Qualifications
Chapter 8 – Noise and Vibration	FT	Maureen Marsden, Meng (Author) John Cullen BAgrSc, Dip. Acoustics and Noise Control, Dip.n Environmental Engineering (Reviewer)
Chapter 9 – Biodiversity	FT	Madeleine van der Poel, MSc Forestry and Conservation (Author) Rita Mansfield, BSc. Applied Ecology; H. Dip Environmental Protection and Pollution Control (Reviewer) <u>Multidisciplinary Surveys</u> Ben O'Dwyer, BSc (Hons) Wildlife Biology <u>Ornithology Author</u> Danny Franklin <u>Bat Surveyor</u> Kate O'Regan, BSc Zoology, MSc Marine Biology Orla Cummins, BSc Ecology and Environmental Biology
Chapter 10 – Soils, Geology and Hydrogeology	FT	Emily Archer, MSc Applied Environmental Geoscience, PGeo, EurGeol (Author) Tom Clayton MEng. (Distinction) Civil Engineering (Reviewer)
Chapter 11 – Hydrology and Water Quality	FT	Brian Cronin, BSc, MSc, MIEI (Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 12 – Material Assets, Telecommunications, Traffic and Transportation	FT	Anthony Ryan, Dip.Hort, BA Heritage Studies, MPlan (Co Author) Aoife Hurd, Beng, Meng Civil, Structural and Environmental Engineering (Co Author) Eoin Downing, Beng Civil Engineering, MSc Sustainable Resource Management (Co Author) Trevor Byrne, BSc, MSc, MIEI (Reviewer)
Chapter 13 – Archaeology, Architectural and Cultural Heritage	John Cronin and Associates (JCA)	Tony Cummins, BA, MA (Author)
Chapter 14 – Landscape and Visual	MacroWorks	Richard Barker BA PG Dip MLA (Author)
Chapter 15 – Interactions of the Foregoing	FT	Cathal Creedon, BA Geography & History, Mplan (Author) Evan Rossiter, BSc City Planning and Environmental Policy, MRUP (Reviewer)



1.9 Difficulties Encountered

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

1.10 Availability of Information

A copy of the EIAR may be viewed online on the An Coimisiún Pleanála website, dedicated project information portal website: cgepgridplanning.ie

A paper copy of the EIAR can be viewed by any member of the public, during office opening hours at the following addresses:

- An Coimisiún Pleanála, 64 Marlborough Street, St. Rotunda, Dublin 1, D01 V902.
- The Offices of Cork County Council, County Hall, Carrigrohane Road, Cork, Co. Cork, T12 R2NC.

Paper copies can also be provided at the cost of printing, by writing to:

Fehily Timoney and Company
Unit 3/4 Northwood House,
Northwood Crescent,
Northwood,
Dublin,
D09 X899



1.11 References

An Bord Pleanála (2025) Online Planning Search. Available at: <http://www.pleanala.ie/>.

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SEAI Interim National Energy Balance 2024. Available at: <https://www.seai.ie/news-and-events/news/seai-interim-national-energy-balance-2024>



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