Planning and Environmental Consultants

Environmental Impact Assessment Report

Seskin Wind Farm, Co. Carlow

Chapter 2 – Background

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2. BACKGROUND

This chapter of the EIAR sets out the relevant energy and climate change related policy and targets along with the strategic, regional, and local planning policies relevant to the Proposed Project. It also summarises EIA scoping and consultations undertaken, and the cumulative impact assessment process.

2.1 Introduction

The Proposed Project consists of 7 no. wind turbines, and associated infrastructure at Seskinrea and surrounding townlands in County Carlow. The Proposed Project will also include a 38kV onsite substation and underground cabling connecting to the existing 110kV Kilkenny substation, outside Kilkenny city.

As the anticipated installed capacity of the Proposed Project is c. 46.2MW, and as this is below the Strategic Infrastructure Development (SID) threshold of 50MW, the application for the Proposed Project will be made to the relevant Local Authorities under Section 34 of the Planning and Development Act 2000 (as amended) ("the Act"). In addition to this, the proposed 38kV grid connection, including the Proposed Grid Connection Route, falls below the 110kV SID threshold for electricity transmission infrastructure. As such, the proposed grid connection infrastructure, including the Proposed Grid Connection Route, will be included in an application to the relevant Local Authorities under Section 34 of the Act.

The majority of the Proposed Project including the 7 no. turbines and associated infrastructure, on-site 38kV substation and approximately 2 kilometres (km) of the Proposed Grid Connection Route is located in Co. Carlow and will be the subject of an application for planning permission to Carlow County Council. The remaining 18.1 km of the Proposed Grid Connection Route is located in Co. Kilkenny, along with junction accommodation works areas for facilitation of turbine delivery, and will be the subject of an application for planning permission to Kilkenny County Council.

The Proposed Project comprises the provision of a Proposed Wind Farm which will generate electricity for export onto the national grid. The need to decarbonise and reduce emissions has always been imperative, however, in recent years the urgency involved has become clearer to all stakeholders. The Climate Action Plan (CAP) first published by the Government in 2019, and updated in 2021, 2023 and 2024, sets out a roadmap to halve emissions by 2030 and reach net zero no later than 2050. Central to this is the set of measures set out to increase the proportion of renewable electricity to up to 80% by 2030. The CAP places front and centre the facts that without urgent action, global warming is likely to be more than 2˚C above pre-industrial levels by 2060, with *'devastating' impacts on nature and 'irreversible changes to many ecosystems'* arising.

Furthermore, the Programme for Government released in June 2020 highlights that *"the reliable supply of safe, secure and clean energy is essential in order to deliver a phase-out of fossil fuels. We need to facilitate the increased electrification of heat and transport. This will create rapid growth in demand for electricity which must be planned and delivered in a cost-effective way."*

The primary driver behind the Proposed Project is the need to provide additional renewable energy to offset the use of fossil fuels within the electricity generating sector. Increasing electricity generation from wind power represents the most economical renewable option to reduce emissions within the power generation sector and is the most mature technology available to achieve national targets that have been established for decarbonisation. The current proposal represents the provision of a significant wind energy proposal and will contribute considerably towards Ireland satisfying its 2030 and 2050 renewable energy targets.

The review of relevant policy contained in this chapter of the EIAR concludes that the Proposed Project is consistent with the overarching planning framework with regard to facilitating the move away from dependency on fossil fuels and the promotion of proper planning and sustainable development.

2.1.1 Renewable Energy Resources

Renewable energy resources are constantly replenished through the cycles of nature, unlike fossil fuels, which are finite resources that are becoming increasingly scarce and expensive to extract. Renewable energy resources offer sustainable alternatives to our dependency on fossil fuels as well as a means of reducing greenhouse gas emissions and opportunities to reduce our reliance on imported fuels. These resources are abundantly available in Ireland, yet only a fraction has been tapped so far[1].

A gradual shift towards increasing our use of renewable energy is no longer viable. There is an urgency now to ensure real changes takes place without delay. Renewable energy development is recognised as a vital component of Ireland's strategy to tackle the challenges of combating climate change and ensuring a secure supply of energy. Ireland is heavily dependent on the importation of fossil fuels to meet its energy need. 70% of energy used in Ireland is imported from abroad, higher than the EU average of almost 60% (National Energy Security Framework 2022). This high dependency on energy imports is highly risky and Ireland is currently extremely vulnerable both in terms of meeting future energy needs and ensuring price stability. As such, expanding indigenous renewable energy supply is critical for climate action, energy security and price stability.

2.2 Climate Change Policy and Targets

International and national policy consistently identifies the need to reduce greenhouse gas (GHG) emissions and stresses the importance of reducing global warming. The context of international policy has altered over the last 30-years from being of a warning nature to the current, almost universally accepted belief, that there is a climate change emergency occurring both within Ireland and at a broader global scale. The Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment Report[2] published in 2021 provides a stark assessment of global climate change and presents evidence that climate changes will increase in all regions of the globe over the coming decades and that much of the damage caused by climate change up to this point is now likely irreversible, such as the rise in sea levels over the 21st century.

According to the World Meteorological Organisation's 30th November 2023 report[2]:

- Based on the data to October, it is virtually certain that 2023 will be the warmest year in the 174-year observational record, surpassing the previous joint warmest years, 2016 and 2020.
- June, July, August, September and October 2023 each surpassed the previous record for the respective month by a wide margin in all datasets used by WMO for the climate report.
- July 2023 became the all-time warmest month on record.
- Global average sea-surface temperatures (SSTs) were at a record observed high for the time of year, starting in the late Northern Hemisphere spring. For April through September 2023 (the latest month for which we have data), SSTs were all at a record warm high, and the records for July, August and September were each broken by a large margin (around 0.21 to 0.27 °C).
- In 2023, global mean sea level reached a record high in the satellite record (since 1993), reflecting continued ocean warming as well as the melting of glaciers and ice sheets. The rate of global mean sea level rise in the past ten years (2013–2022) is more than twice the rate of sea level rise in the first decade of the satellite record (1993–2002).

[1] *Source: Sustainable Energy Authority of Ireland (SEAI) website, www.seai.ie*
[2] https://wmo.int/resources/publications/provisional-state-of-global-climate-2023

In Ireland, extreme weather and climate events driven by climate change are also having major impacts:

- March 2023 was the wettest March on record at four stations in Ireland.
- June 2023 was the hottest June on record in Ireland, with average day and night temperatures above 16 degrees.
- July 2023 brought flash floods in Donegal after 76mm of rain fell on a single day.
- July 2023 was the wettest July on record at 12 weather stations across Ireland.
- September 2023 saw all-time temperatures records broken fourteen Irish weather stations.

The IPCC's Sixth Assessment Report does not, however, conclude that a climate catastrophe is inevitable, but rather, there remains a 'narrow path' to determine the future course of climate, mainly by cutting emissions down to net zero. The Proposed Project will contribute to the decarbonisation of the energy sector and reduce harmful emissions. In this regard, it is in compliance with national and international climate change policy and targets.

2.2.1 International Climate Policy

United Nations Framework Convention on Climate Change

In 1992, countries joined an international treaty, the United Nations Framework Convention on Climate Change (UNFCCC), as a framework for international efforts to combat the challenge posed by climate change. The UNFCCC seeks to limit average global temperature increases and the resulting climate change. In addition, the UNFCCC seeks to cope with impacts that are already inevitable. It recognises that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. The framework set no binding limits on greenhouse gas emissions for individual countries and contains no enforcement mechanisms. Instead, the framework outlines how specific international treaties (called "protocols" or "Agreements") may be negotiated to set binding limits on greenhouse gases.

Kyoto Protocol

The Kyoto Protocol operationalises the UNFCCC by committing industrialised countries and economies in transition to limit and reduce GHG emissions in accordance with agreed individual targets. Ireland is a Party to the Kyoto Protocol, which came into effect in 2005, and as a result of which, emission reduction targets agreed by developed countries are now binding.

In Doha, Qatar, on 8th December 2012, the *"Doha Amendment to the Kyoto Protocol"* was adopted. The amendment includes:

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 1st January 2013 to 31st December 2020;
- A revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and
- Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

Under the Protocol, countries must meet their targets primarily through national measures, although market-based mechanisms (such as international emissions trading) can also be utilised.

COP21 Paris Agreement

COP21 was the 21st session of the Conference of the Parties (COP) to the UNFCCC. Every year since 1995 (excluding 2020 due to COVID-19), the COP has gathered the 196 Parties (195 countries and the European Union) that have ratified the Convention in a different country, to evaluate its implementation and negotiate new commitments. COP21 was organised by the United Nations and held, in Paris, from 30th November to 12th December 2015. COP21 closed with the adoption of the first international climate agreement (concluded by 195 countries and applicable to all). The 12-page text, made up of a preamble and 29 articles, provides for a limitation of the global average temperature rise to well below 2°C above pre-industrial levels and **to limit the increase to 1.5°C**. It is flexible and takes into account the needs and capacities of each country. The IPCC's 6th Assessment Report (2021) further collaborates this need to limit any increase in global average temperature to 1.5°C, stating that (underlined for emphasis),

> *"Humanity has emitted 2,560 billion equivalent tons of CO_2 since 1750, and we only have a budget of 500 more if we want to limit warming to 1.5°C.*

By following a trajectory of very low GHG emissions (SSP1-1.9), the threshold of 1.5°C will be reached in the short term, between 2021 and 2040, before being very slightly exceeded (1.6°C anticipated over the period 2041-2060) then respected in the long term (1.4°C anticipated over the period 2081-2100).

> *Everything is not lost, but we must pursue the Paris Agreement's most ambitious goal of limiting warming to 1.5°C."*

An article published by the IPCC on the 6th October 2018 titled '*Global Warming of 1.5°C*', notes the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways; in the context of mitigation pathways, strengthening of the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. This special report is part of an invitation contained in the Decision of the 21st Conference of Parties of the United Nations Framework Convention on Climate Change to adopt the Paris Agreement, and provides an update on the impact of climate change if emissions are not reduced.

COP27 Egypt

COP27 took place in Sharm el-Sheikh from the 6th of November 2022 to the 20th of November. The Conference of the Parties (COP) is a supreme decision-making body of the United Nations Framework Convention on Climate Change (UNFCCC). COP 27 centred around three major topics:

- Closing the emissions gap to keep 1.5°C alive
- Loss and Damage
- Climate Finance

COP 27 officially ended on the 18th of November, but due to the nature of negotiations an outcome text and the final press conference was not held until November 20th. The first outcomes of the negotiations of the COP 27 agenda were seen in the first draft document. A consolidated final document followed and while it removed much of the vague wording of the draft, it also removed some critical key points, particularly in relation to the strengthening of actions required by developed nations. The most significant outcomes from COP 27 are outlined below:

- **Phase down/out language:** The final agreement was delayed due to the stance of China and India, among others, who were not comfortable with the 'phase out' of coal wording in the

draft text. This led to the watering down of this commitment to a 'phase down' of coal use. The hope was that COP27 would work to include further language on coal and fossil fuel reduction efforts. However, the wider commitment to phase out all fossil fuels, led by India, and backed by the US and the EU, was taken out and can be marked as the biggest disappointment of COP27.

- **1.5°C Pathway:** The 1.5°C warming limit has been retained and reassurances have been made that there is no room for backsliding. It gives the key political signals that the phase down of all fossil fuels is happening. There has been the setting of a workplan for 2023 to help articulate the nature and components of a global collective goal on adaptation and resilience and how it can be formatted in a way to take into account the Global Stocktake.
- **Climate Finance & Loss and Damage:** There has been the launch of an initiative by the V20 and G7 known as the Global Shield Against Climate Risk (GSACR). The intention of this initiative has been framed almost as an insurance policy backed by the World Bank to prepare and protect those most vulnerable to climate change disasters. The initiative seeks to reform the current climate finance model currently operating in the form of loans, typically with high interest rates and repayment requirements. The beginnings of a framework to compensate for the unequal distribution of harm that has been caused by climate change and the unequal contributions of emissions has also been put in place.

COP 28 – United Arab Emirates

The 28th session of the COP to the UN Framework Convention on Climate Change, was held in Dubai from 30 November to 13 December 2023. The main objective of COP was to assess the progress made by all parties on the implementation of the 2015 Paris Agreement through the concluding phase of the 'global stocktake', which began after COP26 in 2021.

The outcomes from COP 28 are as follows:

- **Loss and Damage:** Initiated at COP 27, the fund for the loss and damage to developing countries due to climate change was established. Unlike other forms of climate finance, there is no firm obligation for developed countries to pay into the fund. The loss-and-damage fund being launched was marked as a substantial outcome had been achieved during the COP28 opening session.
- **Fossil Fuel Phase-Out & Increasement of Renewable Energy Capacity:** Another result of the COP 28 was the adoption of a fossil fuel phase-out agreement which commits parties to the transition away from the fossil fuels in energy systems. The agreement calls for a tripling of renewable energy capacity globally by 2030. This was the first time that the COP explicitly addressed the need to end the use of fossil fuels.
- **Adaptation Framework:** An important decision to come out of COP 28 was a "framework" that is meant to guide nations in their efforts to protect their people and ecosystems from climate change. The 'global goal on adaptation' was first established by the Paris Agreement in 2015 but received little attention up until COP 26. Developing countries pushed for financial adaptation targets to be introduced, however, ultimately no quantifiable financial targets were included in the final text.

European Green Deal – European Climate Law (2021)

The European Green Deal, initially introduced by the European Commission in December 2019, sets out the 'blueprint' for a transformational change of the 27-country bloc from a high- to a low-carbon economy, without reducing prosperity and while improving people's quality of life, through cleaner air and water, better health and a thriving natural world. The Green Deal is intended to work through a framework of regulation and legislation setting clear overarching targets, e.g. **a bloc-wide goal of net zero carbon emissions by 2050 and a 55% cut in emissions by 2030 (compared with 1990 levels).** This is a substantial increase compared to the existing target, upwards from the previous target of at least 40% (2030 Climate & Energy Framework), and furthermore, these targets demonstrate the ambition

necessary to keep the global temperature increase to well below 2°C and pursue efforts to keep it to 1.5°C as per the Paris Agreement. With regard to the energy sector, the Green Deal focuses on 3 no. key principles for the clean energy transition, which will help reduce greenhouse gas emissions and enhance the quality of life for citizens:

- Ensuring a secure and affordable EU energy supply;
- Developing a fully integrated, interconnected and digitalised EU energy market; and
- Prioritising energy efficiency, improving the energy performance of our buildings and developing a power sector based largely on renewable sources (e.g. the subject development)

The European Climate Law writes into law the objectives set out above in the European Green Deal for Europe's economy and society to become climate-neutral by 2050. Climate neutrality by 2050 means achieving net zero greenhouse gas emissions for EU countries as a whole, mainly by cutting emissions, investing in green technologies and protecting the natural environment. The Climate Law includes:

- A legal objective for the Union to reach climate neutrality by 2050;
- An ambitious 2030 climate target of at least 55% reduction of net emissions of greenhouse gases as compared to 1990, with clarity on the contribution of emission reductions and removals;
- A process for setting a 2040 climate target, taking into account an indicative greenhouse gas budget for 2030-2050 to be published by the Commission;
- A commitment to negative emissions after 2050;
- The establishment of European Scientific Advisory Board on Climate Change, that will provide independent scientific advice;
- Stronger provisions on adaptation to climate change; and
- Strong coherence across Union policies with the climate neutrality objective

The law aims to ensure that all EU policies contribute to this goal and that all sectors of the economy and society play their part. All 27 no. EU Member States have committed to turning the EU into the first climate neutral continent by 2050. One third of the 1.8 trillion-euro investments from the Next Generation EU Recovery Plan, and the EU's seven-year budget, will finance the European Green Deal. On 14th July 2021, the European Commission adopted a set of proposals[5] to make the EU's climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

Achieving these emission reductions in the next decade is crucial to Europe becoming the world's first climate-neutral continent by 2050. This milestone will only be achieving through the permitting and construction of renewable energy projects, such as the Proposed Project.

2.2.1.2 Project Compliance with International Climate Policy

From the review of the relevant policy documents, it is considered that the Proposed Project of 7 no. turbines will aid in reducing reliance on fossil fuels for electricity generation. This will help to achieve the United Nations Framework Convention on Climate Change goals of limiting global temperatures as a result of climate change and the goals of the Kyoto Protocol and the several Conference of Parties agreements as outlined above. By making a just transition to more renewable forms of electricity generation, the level of carbon emissions will drop as our reliance on non-renewable forms of energy lessen.

The Proposed Project is also considered to be in line with the European Green Deal which also aims to reduce carbon emissions and achieve net zero carbon emissions by 2050. These goals will not be met if projects, such as the one proposed, are not implemented. The construction of this development would also aid in ensuring energy security within the EU which is a target of the European Green Deal. As

wind is an indigenous and abundant resource, countries can tap into their own wind potential, reducing the vulnerability to price fluctuations and geopolitical risks associated with fossil fuel imports.

2.2.2 National Climate Policy

Programme for Government (2020)

The Programme for Government 2020 (June 2020) places specific emphasis on climate change, stating that the next ten years are a critical period in addressing the climate crisis, and therefore, a deliberate and swift approach to reducing more than half of Ireland's carbon emissions over the course of the decade (2020-2030) must be implemented. The programme states that the government are committed to reducing greenhouse gas emissions by an average 7% per annum over the next decade in a push to achieve a net zero emissions by the year 2050.

With regard to energy generation, the Programme notes that the government is committed to the rapid decarbonisation of the energy sector. The Programme states the government's ongoing support and commitment to take "*the necessary action to deliver at least 70% renewable electricity by 2030".* While it is noted this target has been updated to 80%, the Programme for Government sets out a range of measures to achieve this target which remain relevant, including:

- Finalise and publish the Wind Energy Guidelines.
- Continue EirGrid's programme 'Delivering a Secure, Sustainable Electricity System'.
- Strengthen the policy framework to incentivise electricity storage and interconnection.
- Produce a whole-of-government plan setting out how we will deliver at least 70% renewable electricity by 2030.

The Climate Action and Low Carbon Development Act 2015 (as amended)

The Climate Action and Low Carbon Development Act 2015 (as amended) ("the Climate Act") , which commenced on the10 December 2015, legally binds Ireland to achieve net-zero emissions no later than 2050, and to a **51% reduction in emissions by the end of this decade**. The Act provides the framework for Ireland to meet its international and EU climate commitments and to become a leader in addressing climate change. As indicated by the premise of the legislation, the reduction of emissions is a key proponent of the Climate Act and incorporates the following key provisions:

- Embeds the process of setting binding and ambitious emissions-reductions targets in law;
- Provides for a national climate objective, which commits to pursue and achieve no later than 2050, the transition to a climate resilient, biodiversity-rich, environmentally sustainable and climate-neutral economy;
- Provides that the first two five-year carbon budgets proposed by the Climate Change Advisory Council should equate to a total reduction of 51% over the period to 2030, relative to a baseline of 2018;
- The role of the Climate Change Advisory Council has been strengthened;
- The government must adopt carbon budgets that are consistent with the Paris agreement and other international obligations;
- Actions for each sector will be detailed in the Climate Action Plan which must be updated annually; and
- Local Authorities must prepare individual Climate Action Plans which will include both mitigation and adaptation measures and will be updated every five years.

The Proposed Project represents a significant opportunity to be a nationally important wind energy generator, contributing to the 51% reduction in emissions being sought, which is as outlined above a legally binding requirement. The Proposed Project is therefore consistent with binding emissions reduction targets at both a European and National level.

Carbon Budgets

To achieve the 51% emissions reduction target, the Climate Act requires the Climate Change Advisory Council (CCAC) to recommend a proposed programme of economy-wide 5-year Carbon Budgets to the Minister for the Environment, Climate and Communications. The first national carbon budget programme proposed by the Climate Change Advisory Council, approved by Government and adopted by both Houses of the Oireachtas in April 2022 comprises three successive 5-year carbon budgets[3]. The total emissions allowed under each budget are shown in Table 2-1 below.

Table 2-1: Carbon Budgets of the Climate Change Advisory Council

	2021 – 2025 Carbon Budget 1	2026 – 2030 Carbon Budget 2	2031 – 2035 Provisional Carbon Budget 3
	All Gases		
Carbon Budget (Mt CO_2eq)	295	200	151
Annual Average Percentage Change in Emissions	-4.8%	-8.3%	-3.5%
The figures are consistent with emissions in 2018 of 68.3 Mt CO_2eq reducing to 33.5 Mt CO_2eq in 2030, thus allowing compliance with the 51% emissions reduction target by 2030.			

Section 6C of the Climate Act provides that the Minister shall prepare, within the limits of the carbon budget, the Sectoral Emissions Ceilings. These ceilings set out the maximum amount of greenhouse gas emissions that are permitted in each sector. The Government approved Sectoral Emissions Ceilings on 28 July 2022. The electricity sector is allocated a sectoral ceiling of 40 Mt CO2 eq for the first budget (2021-2025) and a sectoral ceiling of 20 Mt CO2 eq for the second budget period (2026-2030). In 2022, the electricity sector emissions were 10.1 Mt CO2 eq[4].

Climate Action Plan 2023

The Climate Action Plan 2023 ('CAP23') was published in December 2022 by the Department of the Environment, Climate and Communications. This outlines the actions required to 2035 and beyond to meet Ireland's commitment to becoming carbon neutral by 2050. CAP23 sets out a roadmap to deliver on Irelands climate ambition and is aligned to ensure that Ireland achieves its legally binding target (the Climate Action and Low Carbon Development (Amendment) Act 2021) of net-zero greenhouse gas emissions no later than 2050. A target aims for a reduction in emissions of 51% over the period 2018 to 2030 and in doing so, prevent / mitigate the potentially devastating consequences of climate change on Ireland's environment, society, economic and natural resources.

The CAP23 states that to do so, Ireland must harness the untapped indigenous renewable resources, and has a target of achieving 80% of energy being produced from renewable sources by 2030 (unchanged from the previous Climate Action Plan, 2022) with a target of 9GW of that being produced by onshore wind. Measures set out in CAP23 to achieve these targets include to 'accelerate and increase the deployment of renewable energy to replace fossil fuels' (Section 12.1.4 CAP23). It is clear from the message and ambition of CAP23 that the drive to deploy renewable energy projects such as the Proposed Project in Ireland are critical to achieving the aims and objectives of CAP23 including the 9GW of onshore wind energy by 2030 and carbon neutrality by 2050.

[3] *Climate Change Advisory Council Carbon Budget Technical Report (October 2021)* https://www.gov.ie/en/publication/9af1b-carbon-budgets/
[4] *Climate Change Advisory Council Annual Review 2023 (July 2023)* https://www.climatecouncil.ie/councilpublications/annualreviewandreport/CCAC-AR-2023-postfinal.pdf

"Achieving these ambitions will require a coordinated effort across Ireland and every economic sector will be involved. It requires no less than a national transformation over the coming years in how we work, travel, heat out homes, source our energy and use our land".

"Decarbonisation of the electricity sector is, as noted in CAP23, key to the decarbonisation of other sectors who will depend on electrification including transport, heating and industry. The increase in portion of renewable electricity of 80% by 2023 will come in part from a targeted 9GW of onshore wind. The plan notes: "Achieving further emissions reductions between now and 2030 requires a major step-up in how we accelerate and increase the deployment of renewable energy to replace fossil fuels, deliver a flexible system to support renewables, and manage electricity demand ".

Chapter 12 of CAP 23 sets out the state of play, targets and actions for the decarbonisation of the Electricity sector. Carbon emissions from electricity have fallen by 45% between 2005 and 2020, falling by 19% between 2005-2012 and by 33% between 2012 and 2020. This trend is largely due to the availability of renewable energy generated electricity (a sixfold increase between 2005 and 2020) and an associated reduction in the use of carbon heavy fuels such as peat and coal.

Due to the scale of the challenge, and the recognition of central role of the electricity sector in achieving sector wide targets, the electricity sector has been allocated the smallest carbon budget and will require the steepest carbon emissions decline of all sectors – namely a reduction in carbon emission by -75% relative to 2018 baseline. Carbon budgets 1 and 2 allow for 30.02 MtCO2eq from the electricity sector up to 2025 and 20 MtCO2eq. from 2026-2030. This means an average of 8 MtCO2eq. per annum. Emissions for the period 2021 were 9.98 MtCO2eq., which is in exceedance of 8 MtCO2eq., which means that to keep on track, electricity will now have to achieve annual emissions of c. 7.5 MtCo2eq. from 2022 to 2025.

The measures set out for the electricity sector include *inter alia*:

- Reduce annual CO2eq. emissions from the sector to 3 MtCO2eq by 2031 (75% reduction compared to 2018);
- Accelerate and increase the deployment of renewable energy to replace fossil fuels;
- Accelerate the delivery of onshore wind, offshore wind and solar through a competitive framework to reach 80% of electricity demand from renewable energy by 2030;
- Target 6GW of onshore wind and to 5 GW of solar by 2025;
- Target 9 GW onshore wind, 8 GW Solar and at least 5 GW of offshore wind by 2030;
- Align the relevant constituent elements of the planning and permitting system to support accelerated renewable energy development, supported by national policy and associated methodologies to inform regional and local planning policies, noting that Development Plans are obliged to set out objectives to facilitate energy infrastructure;

Having regard to the targets and measures set out above, it is clear that there is strong policy support for the provision of additional renewable energy generators, such as the Proposed Project.

Climate Action Plan 2024

The Climate Action Plan 2024 ('CAP 24') builds on CAP 23 by refining and updating the status of the actions required to deliver the decarbonisation required under the carbon budgets and sectoral emissions ceilings. The renewable electricity generation targets are unchanged from the CAP 23 (9GW of onshore wind & 80% renewable electricity share).

CAP 24 includes the latest trends in the electricity sector:

- In 2022, renewable generation accounted for 38.6% of electricity, an increase from 35% in 2021.
- Electricity accounted for 14.4% of Ireland's greenhouse gas (GHG) emissions in 2022.

- To meet the first carbon budget the electricity sector requires a decarbonisation rate of 17.3% per annum in the period 2023-2025. For context, the decarbonisation rate between 2018 and 2022 was 1.4% per annum.

CAP 24 acknowledges the urgency and importance of the decarbonising the electricity sector. The Plan states:

"Given that the programme of large-scale offshore wind deployment is expected to be realised towards end decade, deployment rates for onshore renewables will need to increase to match demand growth to ensure we keep electricity emissions within range of the carbon budgets. This requires a major upscaling and accelerating in current deployment of renewables, particularly onshore wind."

The deployment rates of renewable energy and grid infrastructure required to keep electricity emissions within the carbon budget programme is described as "unprecedented". Further, CAP 24 notes that it will require "urgent action across all actors to align with the national targets". The scale of the challenge is apparent when quantified:

*"As an example, the historical average deployment of onshore wind installed capacity connected between 2008 and 2020 inclusive was ~280 MW per annum from 19 projects (with an annual maximum of 612 MW). To achieve the necessary emissions abatement, an approximately eight-times increase of renewable energy deployment to **2.3 GW annually** would be needed between **2024 and 2030**."*

CAP 24 notes:

"Transformational policies, measures, and actions, along with societal change, are required to meet the electricity sector's sectoral emissions ceiling. During the second carbon budget period, as the necessary infrastructure and projects come online, we will start to realise Ireland's enormous potential for offshore wind. In the meantime, to facilitate the major acceleration and increase in onshore wind turbines and solar PV required nationwide to achieve our national and regional targets, a previously unseen level of electricity network upgrades and construction will be required.

For onshore renewables, greater alignment between national, regional and local plans and renewable energy targets to support investment in and delivery of onshore wind and solar renewable energy is also critical in this context."

CAP 24 identifies the alignment of local and national policy as critical to accelerate renewable energy rollout, noting:

"greater alignment between local plans and renewable energy targets at national and regional level to support investment in and delivery of onshore wind and solar renewable energy is also critical".

To meet the challenge posed, an acceleration of the deployment of renewable electricity generation is required, to include: (inter alia)

"Accelerate the delivery of utility-scale onshore wind, offshore wind, and solar projects through a competitive framework;

- *Target 6 GW of onshore wind and up to 5 GW of solar by 2025;*
- *Target 9 GW of onshore wind, 8 GW of solar, and at least 5 GW of offshore wind by 2030;*
- *All new or repowered renewable electricity generation projects shall implement a Community Benefit Fund equivalent to the RESS requirements of €2/MWh;*
- *Most fundamentally, significant investment is needed in the transmission and distribution systems to maximise the usage of renewable electricity and to reduce constraints and congestion on the system...*

- *Deliver a streamlined electricity generation grid connection policy and process, and remove barriers, where possible, for the installation of renewables and flexible technologies reducing the need to build new grid, including hybrid (wind/solar/storage) connections;*
- *Provide for greater alignment between local plans and renewable energy targets at national (and regional) levels, taking into account regional targets once established and the revised National Planning Framework;*
- *In line with transposing the revised Renewable Energy Directive, which entered into force in November 2023, ensure that the permit-granting procedure, the planning, construction and operation of renewable energy plants, the connection of such plants to the grid, the related grid itself, and storage assets are presumed as being in the overriding public interest;"*

2.2.2.2 Project Compliance with National Climate Policy

The Proposed Project consisting of 7 no. wind turbines and associated infrastructure aligns with the national climate policy objectives. The Proposed Project will make a significant contribution to achieving the CAP 24 target of 9GW of onshore wind energy by the year 2030. Furthermore, the Proposed Project will aid Ireland in adhering to, or limiting the exceedance of, the country's carbon budgets. Currently, the electricity sector is rapidly approaching the designated sectoral ceiling of 20 Mt CO2 eq for the first carbon budget period from 2020 to 2025. The national renewable energy targets and the carbon budgets are integral to the government's response to the climate crisis.

2.3 Renewable Energy Policy and Targets

2.3.1 European Renewable Energy Policy

Renewable Energy Directive

The Renewable Energy Directive is the EU legal framework for the development of renewable energy across all sectors of the EU economy, supporting clean energy cooperation across EU countries. Since the introduction of the Renewable Energy Directive (RED) in 2009, it has undergone several revisions since then and these revisions. Since its adoption in 2009, the share of renewable energy sources in energy consumption has increased from 12.5% in 2010 to 23% in 2022[5]. Of the 27 EU member states the lowest proportions of renewables were recorded in Ireland (13.1%). Crucially, the Renewable Energy Directive sets the overall target for renewable energy in the EU.

RED I - 2009

Renewable Energy Directive 2009 (RED I - the original RED) (2009/28/EC), adopted in 2009, set binding targets for EU member states to achieve a 20% share of renewable energy in final energy consumption by 2020. It established a framework for national renewable energy action plans, sustainability criteria for biofuels and bioliquids, and a system of guarantees of origin for renewable energy.

RED II – 2018

RED II, the first major amendment to the RED, (2018/2001/EU) entered into force in December 2018, as part of the Clean Energy for all Europeans package. In RED II, the overall EU target for Renewable Energy Sources consumption by 2030 was raised to 32%.

[5] *https://ec.europa.eu/eurostat/en/web/products-eurostat-news/w/ddn-20231222-2*

RED III – 2023

In November 2023, a revision of the Renewable Energy Directive[6] (RED III), came into force. RED III increases the EU wide renewable energy target from 32% set under the previous revision of the directive to at 42.5%, with an ambition to reach 45% by 2030. The increase was proposed under the publication of REPowerEU plan in May 2022. The Directive also introduces specific targets for Member States in the industry, transport, and building (district heating and cooling) sectors.

Under RED III, EU member states must identify areas for the acceleration of renewables where projects will undergo a simplified and fast-track procedure. The deployment of renewables will also be of "*overriding public interest*" in order to limit the number of legal challenges on new renewable energy installations. These measures came in response to REPowerEU which found that permitting is the biggest bottleneck for deploying wind at scale, with approximately 80 GW of wind power capacity stuck in permitting procedures across Europe.

There is an 18-month period to transpose most of the directive's provisions into national law, with a shorter deadline of July 2024 for some provisions related to permitting for renewables.

REPowerEU

The European Commission has proposed an outline of a plan to make Europe independent from Russian fossil fuels including oil and gas, due to the high and volatile energy prices, and security of supply concerns following Russia's unprecedented military attack on Ukraine. At the time of publication, the EU imported 90% of its gas consumption, with Russia providing around 45% of those inputs. Russia also accounted for around 25% of oil and 45% of coal imports. Phasing out dependence on fossil fuels can be done well before 2030, increasing the resilience of the EU-wide energy system based on two pillars:

1. Diversifying gas supplies, via higher Liquefied Natural Gas (LNG) and pipeline imports of biomethane and renewable hydrogen production and imports from non-Russian suppliers.

2. Reducing faster the use of fossil fuels by boosting energy efficiency, increasing renewables and addressing infrastructure bottlenecks.

With full implementation of the measures in REPowerEU plan, at least 155 bcm of fossil gas use could be removed, which is equivalent to the volume imported from Russia in 2021. Nearly two thirds of that reduction can be achieved within a year. A part of this plan includes *'Speeding up renewables permitting to minimise the time for roll-out of renewable projects and grid infrastructure improvements'*. This will make the sector more efficient and reach the set goals faster.

As such, it is submitted that the Proposed Project is strongly supported by EU energy policy. Many of the measures outlined in REPowerEU have been incorporated into national Policy through the National Energy Security Framework, which was published by the Government in April 2022, and discussed in further detail in Section 2.3.2.

Regulation 2022/2577

In recognition of the worsening energy crises arising from Russia's war against Ukraine, the Council of the European Union adopted Regulation (EU) 2022/2577 on 22 December 2022, '*Laying down a framework to accelerate the deployment of renewable energy*.' This regulation, which has immediate and direct effect in Member States, applies to "*all permit-granting processes that have a starting date within the period of its application*" and includes a number of tangible measures aimed at streamlining

[6] *Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast)*

the permit-granting process and facilitating the accelerated deployment of renewable energy. The period of application of the Regulation is the 30 December 2022 to 29 June 2024 and therefore applies to the present applications and EIA.

> *'A fast deployment of renewable energy sources can help to mitigate the effects of the current energy crisis, by forming a defence against Russia's actions. Renewable energy can significantly contribute to counter Russia's weaponisation of energy by strengthening the Union's security of supply, reducing volatility in the market and lowering energy prices.'*[7]

Central to the regulation is the presumption that renewable energy development must be considered to be in the overriding public interest when addressing competing interests under the Habitats Directive (92/43/EEC), Birds Directive (2009/147/EEC) and the Water Framework Directive (2006/60/EC) and that renewable energy projects should be given priority when balancing legal interests in a given case – Article 3:

> 1) *'The planning, construction and operation of plants and installations for the production of energy from renewable sources, and their connection to the grid, the related grid itself and storage assets shall be presumed as being in the overriding public interest and serving public health and safety when balancing legal interests in the individual case, for the purposes of Article 6(4) and Article 16(1)(c) of Council Directive 92/43/EEC, Article 4(7) of Directive 2000/60/EC of the European Parliament and of the Council and Article 9(1)(a) of Directive 2009/147/EC of the European Parliament and of the Council....'*
>
> 2) *'Member States shall ensure, at least for projects which are recognised as being of overriding public interest, that in the planning and permit-granting process, the construction and operation of plants and installations for the production of energy from renewable sources and the related grid infrastructure development are <u>given priority when balancing legal interests in the individual case</u>....* (emphasis added)'

The Regulation was introduced as a temporary, emergency measure and included provision for the EU Commission to review the application of, and continued need for, the measures included in the Regulation. The Commission completed its review of the Regulation and furnished its report to the Council on the 28 November 2023. In its report the Commission recommended the prolongation of the validity of certain measures in the Regulation, including Article 3(2), and by Regulation 2024/223 of the 22 December 2023 the Council of the European Union, Regulation 2022/2577 was extended and amended, with Article 3 applying to the all permit-granting processes commenced up to the 30 June 2025.

The importance, continued need and effectiveness of Article 3(2) of Regulation 2022/2577 in aiding the accelerated deployment of renewable energy is explained in Recital 14 of Regulation 2024/223:

> *'...Article 3(2) of Regulation (EU) 2022/2577 requires priority to be given to projects that are recognised as being of overriding public interest whenever the balancing of legal interests is required in individual cases and where those projects introduce additional compensation requirements for species protection... The first sentence of Article 3(2) of Regulation (EU) 2022/2577 has the potential, in the current urgent and still unstable energy situation on the energy market which the Union is facing, to further accelerate renewable energy projects since <u>it requires Member States to promote those renewable energy projects by giving them priority when dealing with different conflicting interests beyond environmental matters in the context of Member States' planning and the permit-granting process.</u> The Commission's report demonstrated the value of the first sentence of Article 3(2) of Regulation (EU) 2022/2577 which recognises the relative importance of renewable energy deployment in the current difficult*

[7] *Council Regulation (EU) 2022/2577, at Recital 1*

energy context beyond the specific objectives of the derogations foreseen in the Directives referred to in Article 3(1) of Regulation (EU) 2022/2577. Given the particularly severe situation in the supply of energy which the Union is currently facing, it is appropriate to prolong the application of Article 3(2) of Regulation (EU) 2022/2577 in order to appropriately recognise the crucial role played by renewable energy plants to fight climate change and pollution, reduce energy prices, decrease the Union's dependence on fossil fuels and to ensure the Union's security of supply in the context of the balancing of legal interests carried out by permit-granting authorities or national courts. At the same time, it is also appropriate to keep the environmental safeguard that, for projects recognised as being of overriding public interest, appropriate species conservation measures, underpinned by sufficient financial resources, are adopted. (emphasis added)'

Energy Roadmap 2050

The Energy Roadmap 2050 was published by the European Commission in 2011 and analyses the transition of the contemporary energy system in ways that would be compatible with the greenhouse gas reductions targets as set out in the Renewable Energy Directive (Directive 2009/28/EC) while also increasing competitiveness and security of supply. To achieve these targets and objectives, the Roadmap states that significant investments will need to be made in new low-carbon technologies and renewable energy, e.g. wind energy infrastructure, energy efficiency and grid infrastructure. Five main routes are identified to achieving a more sustainable, competitive and secure energy system in 2050:

- High Energy Efficiency;
- Diversified Supply Technologies;
- High Renewable Energy Sources;
- Nuclear energy; and
- Carbon capture and storage.

The analysis found that decarbonising the energy system is technically and economically feasible. The Roadmap notes that all scenarios show the biggest share of energy supply technologies in 2050 comes from renewables. In this regard, it should be noted that the Climate Change Advisory Council states within their 2022 Annual Review (August 2022) that to reach "*demanding emissions reductions targets required under our climate targets, wind and solar resources will need to be harnessed to a greater and faster extent than previously considered*". As such, a major prerequisite for a more sustainable and secure energy system is a higher share of renewable energy up to and beyond 2030 to 2050. Each of the scenarios assumes in the analysis that increasing the share of renewable energy and using energy more efficiently are crucial, irrespective of the particular energy mix chosen.

2.3.1.2 Project Compliance with European Renewable Energy Policy

The Proposed Project is considered to be fully in accordance with the above-mentioned EU Policy targets. The targets outlined in the 2030 Climate and Energy Framework are in line with the Proposed Project. An EU wide binding target of 27% renewable energy by 2030 and a target of at least 27% energy efficiency by 2030 are both targets that could be achieved by the implementation of the Proposed Project and similar projects. The target of increasing the binding target of the EU's energy mix from 32% to 40% by 2030 is also considered to be a target that would be achievable by the construction of schemes such as the one proposed. Similarly, in the Energy Roadmap 2050 which considers scenarios which will lead to achieving the EU's climate action and energy goals. The Roadmap notes that all scenarios show the biggest share of energy supply technologies in 2050 comes from renewables. Therefore, it is submitted that the Proposed Project is in line with the EU Energy Roadmap.

The RePowerEU plan, aims at increasing the energy security within the EU and increasing the share of renewable energy onto the EU electricity grid. A part of this plan includes *'Speeding up renewables permitting to minimise the time for roll-out of renewable projects and grid infrastructure improvements'*. This will make the sector more efficient and reach the set goals faster. Therefore, it is considered that

the Proposed Project is strongly supported by EU energy policy. Furthermore, Regulation 2022/2577 introduced significant measures to facilitate the acceleration of the deployment of renewable energy, including an obligation on member states to prioritise the roll of renewable energy projects when balancing competing legal interests. This Regulation applies to the present planning applications and EIA and further justifies the granting of consent for the Proposed Project.

2.3.2 National Renewable Energy Policy

White Paper on 'Ireland's Transition to a Low Carbon Energy Future' 2015 - 2030

On 12th May 2014, the Green Paper on Energy Policy in Ireland was launched which marked the start of a public consultation process on the future of Ireland's energy policy over the medium to long-term. The Department of Communications, Climate Action & Environment acknowledged that energy is an integral part of Ireland's economic and social landscape and that "*a secure, sustainable and competitive energy sector is central to Ireland's ability to attract and retain Foreign Direct Investment and sustain Irish enterprise. The three key pillars of energy policy are to focus on security, sustainability and competitiveness*"

Following on from an extensive consultation process, a Government White Paper entitled '*Ireland's Transition to a Low Carbon Energy Future 2015-2030*' was published in December 2015 by the (then) Department of Communications, Energy and Natural Resources ("DCENR"). This Paper provides a complete energy update and a framework to guide policy up to 2030. The Paper builds upon the White Paper published in 2007 and takes into account the changes that have taken place in the energy sector since 2007.

The policy framework was developed to guide policy and actions that the Irish Government intends to take in the energy sector up to 2030 and also reaching out to 2050 to ensure a low carbon future that maintains Ireland's competitiveness and ensures a supply of affordable energy. The Energy Vision 2050, as established in the White Paper, describes a '*radical transformation*' of Ireland's energy system which will result in GHG emissions from the energy sector reducing by between 80% and 95%, compared to 1990 levels. The paper advises that a range of policy measures will be employed to achieve this vision with emphasis on the generation of electricity from renewable sources, which there are plentiful indigenous supplies and increasing the use of electricity and bio energy to heat homes and fuel transport.

In this White Paper, the DCENR acknowledges that onshore wind is one of the cheapest forms of renewable energy in Ireland, stating that:

> *"Onshore wind continues to be the main contributor (18.2% of total generation and 81% of RES-E in 2014). It is a proven technology and Ireland's abundant wind resource means that a wind generator in Ireland generates more electricity than similar installations in other countries. This results in a lower cost of support."*

National Energy Security Framework

The National Energy Security Framework (DECC, April 2022) highlights clearly the impacts the Russian invasion of Ukraine and the resulting war has had on Europe's energy system. The resulting decision by the European Union to phase out the import of Russian gas, oil and coal (REPowerEU) has brought to the fore the importance of security of supply and how energy policy is designed for long-term resilience. It takes account of the need to decarbonise society and economy, to reduce Ireland's emissions by 51% over the decade to 2030 and reach net zero emissions by 2050. According to the SEAI's Energy in Ireland (2021) report, oil accounts for 45% of Ireland's primary energy requirement making it one of the highest rates of oil dependency in the EU. The International Energy Agency, of which Ireland is a member country, includes a 10-point plan to cut oil use which calls for an

acceleration in the deployment of wind and solar projects. Ireland's response per the Framework is set out over three themes:

- Theme 1 – managing the impact on consumers and businesses
- Theme 2 – ensuring security of energy supply in the near-term
- Theme 3 – reducing our dependency on imported fossil fuels in the context of the phasing out of Russian energy imports across the EU

In relation to theme 3, the Framework highlights that replacing fossil fuels with renewables, including wind energy, will be a focus area of work. The Framework calls for "*Supportive policies across Government and State agencies"* which *"can reduce barriers and fast track permitting for renewable energy generation projects. Similarly, renewable energy developers need to match this through taking a leadership role in delivering high quality applications to relevant consenting authorities, meeting project milestones on time and minimising delays."* There are a number of 'Responses' set out in the Framework aimed at reducing reliance on imported fossil fuels and increasing indigenous renewable energy generation, including Response 25 which seeks the alignment of all elements of the planning system to support accelerated renewable energy development.

Having regard to the above, it is clear that the provision additional renewable energy generation, such as the Proposed Project, is vital in helping to secure the State's energy supplies and reduce reliance on imported fossil fuels.

Energy Security in Ireland to 2030 – Energy Security Package

Published in November 2023, the energy security package titled '*Energy Security in Ireland to 2030*' builds on the policies set out in the NESF. The energy security package is based on the recognition of the following fact:

"Ireland's future energy will be secure by moving from an oil-, peat-, coal- and gas-based energy system to an electricity-led system maximising our renewable energy potential, flexibility and being integrated into Europe's energy systems."

The energy security package includes a range of measures to implement this approach by the prioritisation of the following:

1. Reduced and Responsive Demand.
2. Renewables-Led System.
3. More Resilient Systems.
4. Robust Risk Governance.

Independent research undertaken as part of the package, the McCarthy Report, provides an analysis of developments in the electricity sector in Ireland. The McCarthy Report makes the following observation in relation to the consenting process:

"The problem of delays encountered by major infrastructure projects, including in the electricity system, due to planning and environmental consent issues was evident. They had been commented upon by the International Energy Agency in its 2019 review of Ireland which named planning delays as the principal challenge to delivery of policy for the sector."

A key finding from the technical analysis conducted as part of the energy security package is the interdependence of energy security on two essential pillars: 'harnessing our indigenous renewable energy resources at speed and at scale and the rapid electrification of energy demand'. As such, the energy security package provides additional measures to supplement the existing measures introduced under previously published government policy documents. Those additional measures most relevant to the Proposed Project are as follows:

"Action 10: To implement Planning and Consenting System Reforms and provide greater certainty to the sector."

The energy security package aims to ensure that the planning system is fully aligned and resourced to fully support accelerated renewable energy development. It also aims to ensure renewable energy projects are prioritised in line with the recast Renewable Energy Directive, RePowerEU and EU Regulation 2022/2577.

The Proposed Project will significantly support the government's objectives in ensuring the State's energy security. The Proposed Project serves as a domestic renewable energy generator capable of providing clean electricity to the national electricity grid, contributing to a renewables-led system.

2.3.2.2 Project Compliance with the National Renewable Energy Policy

The National Energy Security Framework identifies a number of measures to fast track Irelands transition to renewable energy projects. In this regard, it is considered clear that the implementation of the Proposed Project would fully be in accordance with the framework by increasing the share of renewable energy onto the national grid and thereby accelerating Irelands transition to a low carbon energy future.

2.4 Climate and Renewable Energy Target Progress

At a European level, the latest data shows that, as of 2022, 23% of energy came from renewable energy sources[8]. This represents an increase of 1.1% compared to 2021 levels. While progress is being made to increase the share of renewable energy, it is clear that all EU member states need to intensify their efforts to collectively comply with the target of 42.5% set in the latest revision of the renewable energy directive.

Of the 27 EU member states, Sweden has the highest share of energy from renewable sources. 66% of gross final energy consumption in Sweden comes from renewable energy sources. Ireland on the other hand, has the lowest share of energy from renewable sources at 13.1%. It is evident that Ireland is not performing well when compared against our European counterparts and that urgent action is required to increase the overall share of renewable energy in our gross final energy consumption. When it comes to the share of renewable energy in electricity, Ireland does perform better generating 36.8% in 2022, but still below the EU average of 41.1%[9].

[8] https://ec.europa.eu/eurostat/en/web/products-eurostat-news/w/ddn-20231222-2
[9] https://ec.europa.eu/eurostat/databrowser/view/nrg_ind_ren__custom_9264705/default/bar?lang=en

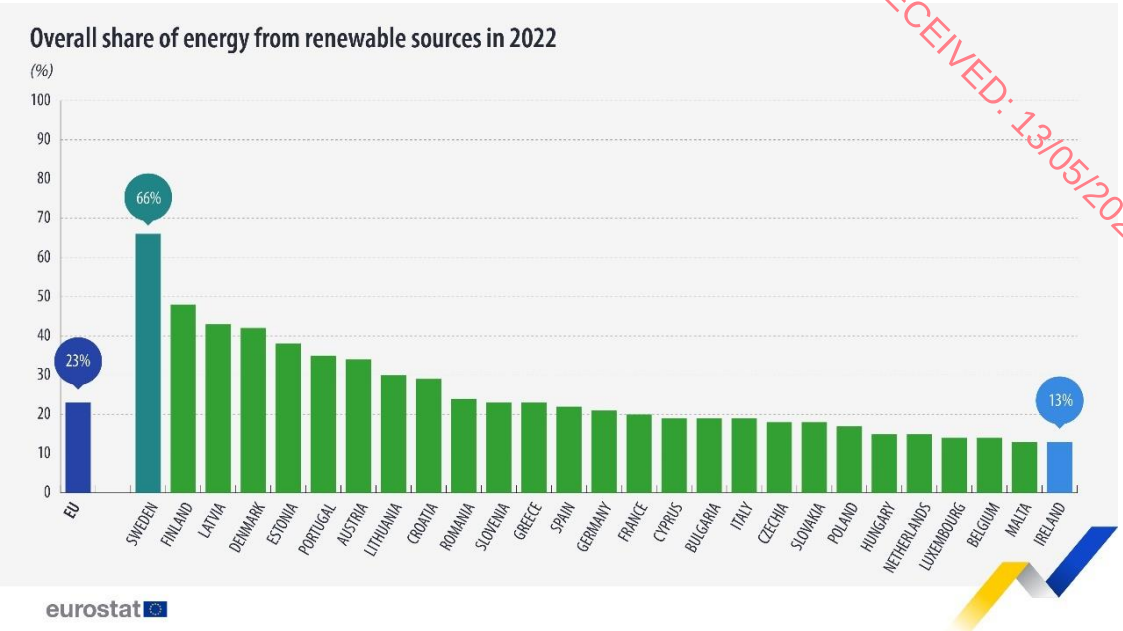

Figure 2-1: Overall share of energy from renewable sources (source: Eurostat)

Ireland's Greenhouse Gas Emissions Projections 2022 – 2040 (June 2023)

The Environmental Protection Agency (EPA) publish Ireland's Greenhouse Gas Emission Projections and at the time of writing, the most recent report, '*Ireland's Greenhouse Gas Emissions Projections 2022–2040*' was published in June 2023. The report includes an assessment of Ireland's progress towards achieving its emission reduction targets out to 2030 set under the EU ESD and Effort Sharing Regulation (ESR).

The EPA has produced two scenarios in preparing these greenhouse gas emissions projections: a "With Existing Measures" (WEM) scenario and a "With Additional Measures" (WAM) scenario. These scenarios forecast Irelands greenhouse gas emissions in different ways. The WEM scenario assumes that no additional policies and measures, beyond those already in place by the end of 2021. This is the cut off point for which the latest national greenhouse gas emission inventory data is available, known as the 'base year' for projections. The WAM scenario has a higher level of ambition and includes government policies and measures to reduce emissions such as those in Ireland's Climate Action Plan 2023.

The EPA Emission Projections Update notes the following key trends:

- Ireland is not on track to meet the 51 per cent emissions reduction target (by 2030 compared to 2018) based on these projections which include most 2023 Climate Action Plan measures.
- Emissions from the Energy Industries sector is projected to decrease by between 50 and 60 per cent over the period 2021 to 2030. Renewable energy generation is projected to range from 68 to over 80 per cent of electricity generation as a result of projected further and rapid expansion in wind energy and other renewables.
- Sectoral emissions ceilings for 2025 and 2030 are projected to be exceeded in almost all cases, including Agriculture, Electricity, Industry, and Transport.
- The first two carbon budgets (2021-2030), which aim to support achievement of the 51 per cent emissions reduction goal, are projected to be exceeded by a significant margin of between 24 and 34 per cent.

As decarbonising electricity generation will have a significant positive contribution in achieving Ireland's emissions it is clear that additional renewable energy production such as that of the Proposed Project must be encouraged and supported if carbon saving targets are to be met.

National Energy Projections (November 2023)

The National Energy Projections report was published by the SEAI in November 2023 sets outs the most recent updates to Ireland's progress towards its binding European and National renewable energy targets. Based on the EPA projections outlined above published in June 2023, the report presents the findings of the 2023 national energy and climate modelling cycle.

The existing EU wide target set in REDII is 32% RES by 2030. Irelands current national EU binding target for 2030 RES is 34.1%. There are also interim targets for 2022, 2025 and 2027, as shown in Table 2-2 below. Since the publication of the *National Energy Projections* report, the European Parliament and Council have introduced REDIII, increasing this target to a minimum of 42.5% RES by 2030. It is likely that Ireland's national target will increase in line with the increase at EU level.

Table 2-2: Overall renewable energy share projections under EPA scenarios

Current REDII target for overall renewable energy share (RES) for Ireland		WEM	WAM - CAP 21	WAM – CAP23
2025	Projected overall RES	19%	20%	22%
	REDII overall RES target for Ireland	24%	24%	24%
	Gap to target	-4%	-3%	-2%
2027	Projected overall RES	22%	26%	27%
	REDII overall RES target for Ireland	28%	28%	28%
	Gap to target	-5%	-2%	-1%
2030	Projected overall RES	31%	40%	45%
	REDII overall RES target for Ireland	34%	34%	34%
	Gap to target	-3%	6%	11%

In the interim years of 2025 and 2027, the WAM-CAP23 scenario indicates a failure to meet the interim overall RES targets. This is attributed to the revised profile of renewable generation capacity additions, which now assumes that more of the planned capacity will arrive later in the decade. If Ireland's target aligns with the increased EU-level goal under RED III, it would widen the gap to the target during the interim years.

The decarbonisation of the electricity generation is critical considering the need to electrify other sectors such as heating and transport in order to achieve the sectoral decarbonisation targets. By 2030, renewable energy sources are anticipated to dominate electricity generation, particularly experiencing a significant surge later in the decade attributed to the integration of substantial offshore wind projects. In the CAP23 scenario, there is an expedited deployment of onshore renewable generation capacity in the earlier years of the decade compared to the CAP21 scenario. However, both scenarios aim to achieve a similar overall percentage of electricity derived from renewable sources (RES-E) by the year 2030.

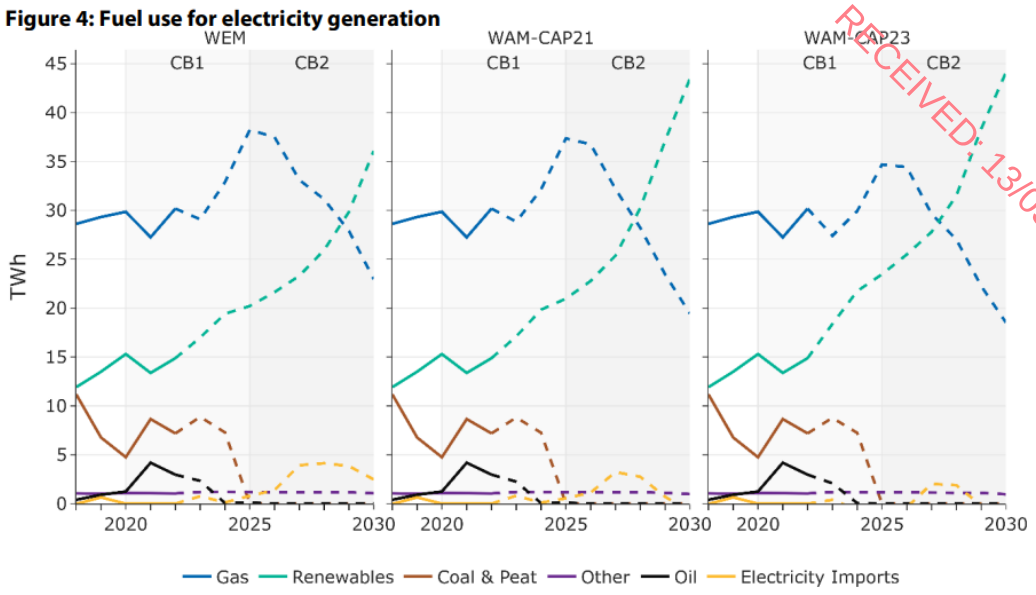

Figure 2-2: Electricity generation by fuel source (source: SEAI)

The report projects greenhouse gas emissions under the WEM and WAM scenarios. It is projected that in both the WEM and WAM scenarios, the carbon budget for the electricity sector will be exceeded. This is largely due to the cumulative nature of the carbon budgets, where exceedances in the early years results in steeper emissions reductions in the latter years to compensate. In the WEM scenario, emissions are projected to reach the first sectoral ceiling in 2024. This results in a significant overspend of 7.4 $MtCO_2eq$ (19%) within the final 2 years of the first carbon budget period 2020–2025. This would have a knock-on effect on the second carbon budget period 2025-2030, which would likely be unattainable from the outset.

Under the WAM CAP23 scenario, cumulative emissions reach the first sectoral ceiling in the 2024, leading to an overspend of the first budget period by 5.6 $MtCO_2eq$ 2024-2026. Despite the improvement on the WEM scenario, the WAM CAP23 scenario exceeds the second budget period (2025 – 2030) ceiling by 2027. By the end of the decade, the WAM CAP23 scenario projects an exceedance of 13.8 $MtCO_2eq$ (23%).

It is clear from the projections outlined above that unprecedented action is required as soon as possible. Unless carbon emissions are reduced sharply before 2025, it will be impossible to stay within the second budgeting period as required to by law under the Climate Act.

The Climate Change Advisory Council Annual Review 2023

The Climate Change Advisory Council (CCAC) concluded within their '*2023 Annual Review'* that at the current rate of policy implementation, *"Ireland will not meet the targets set in the first and second carbon budget periods unless urgent action is taken immediately and emissions begin to fall much more rapidly"*.

In relation to the rollout of renewable energy, the CCAC note that the current rate of renewable energy connections to the national grid needs to increase substantially in order to meet CAP23 targets. The CCAC state:

> *"The current rate of connecting renewables will need to more than double to meet NCAP 2023 targets for 9GW of onshore wind and 8GW of solar power connected to the electricity system by 2030, which for context equates to a further approximately 1,500MW of onshore renewables connected to the electricity system on average each year."*

The CCAC reiterates the importance of EU Regulation 2022/2577 and its objective to ensure "*the planning, construction and operation of plants and installations for the production of renewable energy is presumed to be in the overriding public interest".* The CCAC acknowledge the quantity of planning applications necessary to achieve the CAP 23 target of 9GW of onshore wind energy and advise that further resources are put in place to ensure that the consenting authorities are well resourced to assess these applications.

Ireland's Climate Change Assessment (January 2024)

In January 2024, the EPA published Irelands Climate Change Assessment (ICCA). This assessment provides a comprehensive overview and breakdown of the state of knowledge around key aspects of climate change with a focus on Ireland. The ICCA report is presented in four volumes.

- Volume 1: Climate Science – Ireland in a Changing World
- Volume 2: Achieving Climate Neutrality in 2050
- Volume 3: Being Prepared for Irelands Future
- Volume 3: Realising the Benefits of Transition and Transformation

The ICCA Synthesis Report states that having peaked in 2001, Irelands greenhouse gas emissions have reduced in all sectors except agriculture. However, Ireland currently emits more greenhouse gases per person than the EU average. The report goes on to state that there has been an identified gap in policy that indicates that Ireland will not meet its statutory greenhouse gas emission targets. Achieving net zero carbon dioxide emissions by 2050 requires significant and unprecedented changes to Ireland's energy system. Policies tailored to suit different stages of technology development are critical for achieving a net zero energy system. Established technologies, such as wind energy, solar photovoltaics and bioenergy will be key in meeting short-term emission reduction targets (i.e. 2030), whereas offshore wind infrastructure is expected to be the backbone of future energy systems. This can only be achieved with appropriate support schemes, regulation and investments for synergistic growth of offshore wind and other renewable technologies.

There are well-established 'no-regret options' that need to happen now, which can get Ireland most of the way to net zero carbon dioxide emissions. Beyond that, there are 'future energy choices' relating to the scale and magnitude of technologies that will assist in achieving Ireland statutory climate targets. Ireland's no-regret options are demand reduction (e.g. through energy efficiency and reduced consumption), electrification (e.g. electric vehicles and heat pumps), deployment of market-ready renewables (e.g. wind energy and solar photovoltaics) and low-carbon heating options (e.g. district heating); Irelands future choices include hydrogen, carbon capture and storage, nuclear energy and electro-fuels. Renewable energy can increasingly provide our future energy needs but will need to be complemented with carbon dioxide removals to achieve a net zero energy system in hard-to-abate sectors.'

2.5 Planning Policy Context

This section of the EIAR provides the strategic planning context of the Proposed Project. As is examined below, the Proposed Project is in line with national, regional and local policies, frameworks, guidelines and plans. This section has been broken down to the following sections:

- National Policy Context
- Regional Policy Context
- Local policy Context

As a renewable energy project, the Proposed Project is consistent with the overall national policy objectives to increase penetration and deployment of renewable energy resources and has been designed in the context of the relevant wind energy and other guidelines. Compliance with the Carlow and Kilkenny County Development Plan policies are dealt with in detail in the Local Policy section below. The Proposed Wind Farm is assessed in further detail against the provisions of the Carlow County Development Plan in the Planning Report included within the planning application to Carlow County Council.

2.5.1 National Policy Context

National Policy Framework: Project Ireland 2040

The National Planning Framework (NPF), published in February of 2018, forms the top tier of the national planning policy structure which establishes the policy context for the Regional Spatial and Economic Strategies (RSES) and local level development plans. In an effort to move away from developer led development to one informed by the needs and requirements of society up to 2040, a number of objectives and policies have been put in place in order for the country to grow and develop in a sustainable manner.

- Developing a new region-focused strategy for managing growth;
- Linking this to a new 10-year investment plan, the Project Ireland 2040 National Development Plan 2018-2027;
- Using state lands for certain strategic purposes;
- Supporting this with strengthened, more environmentally focused planning at local level; and
- Backing the framework up in law with an Independent Office of the Planning Regulator.

The NPF notes that the population of Ireland is projected to increase by approximately 1 million people by 2040 which will result in a population of roughly 5.7 million. This population growth will place further demand on both the built and natural environment. To strengthen and facilitate more environmentally focused planning at the local level, the NPF states that future planning and development will need to:

> "*Tackle Ireland's higher than average carbon-intensity per capita and enable a national transition to a competitive low carbon, climate resilient and environmentally sustainable economy by 2050, through harnessing our country's prodigious renewable energy potential.*"

A key focus throughout the NPF is the fostering of a transition toward a low carbon, climate-resilient society. In this regard, one of the stated key elements of the NPF is an Ireland which has a secure and sustainable renewable energy supply and facilitates the ability to diversify and adapt to new energy technologies. Key features identified in the NPF to facilitate the transition towards a low carbon energy future include:

- A shift from predominantly fossil fuels to predominantly renewable energy sources.
- Increasing efficiency and upgrades to appliances, buildings and systems.
- Decisions around development and deployment of new technologies relating to areas such as wind, smart grids, electric vehicles, buildings, ocean energy and bio energy.
- Legal and regulatory frameworks to meet demands and challenges in transitioning to a low carbon society.

Relevant to the subject development, the **National Strategic Outcome 8** (*Transition to Sustainable Energy*), notes that in creating Ireland's future energy landscape, new energy systems and transmission grids will be necessary to enable a more distributed energy generation which connects established and emerging energy sources, i.e. renewables, to major sources of demand. The successful transition to a low-carbon power system will depend on the pillars of 1) *Sustainability*, 2) *Security of supply* and 3) *Competitiveness*. A common theme underpinning these pillars is the need for a fit-for-purpose transmission and distribution energy network. Specifically, the NPF states that reinforcement of the distribution and transmission network to facilitate planned growth and distribution of a more renewables focused source of energy across the major demand centres, e.g. the functional purpose of the extant grid connection.

Ireland's national energy policy under **Objective 55** aims to '*promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050'*. The NPF aims to ensure that decisions that are made today meet our future needs in a sustainable manner.

> *"The manner in which we plan is important for the sustainability of our environment. Our planning system has influence across a wide range of sectors, both directly and indirectly and interacts with many common issues related to effective environmental management, including water services, landscape, flood risk planning, protection of designated sites and species, coastal and marine management, climate mitigation and adaptation, and land use change."*

An overarching objective of the NPF is to foster a transition toward a low carbon, climate-resilient society, which reflects the policy ethos established at the European level of governance (e.g. climate change and renewable energy targets – Section 2.2 & 2.3). In this regard, one of the key themes of the NPF is the realisation of an Ireland which has a secure and sustainable renewable energy supply and the ability to diversify and adapt to new energy technologies. The NPF references the National Climate Policy Position (superseded by the then CAP 2019) which established the fundamental objective of achieving transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050. The NPF emphasises that rural areas have a strong role to play in securing a sustainable renewable energy supply for the country and acknowledges that *"rural areas have significantly contributed to the energy needs of the country and continue to do so"*. In this regard, the NPF states:

> *"In meeting the challenge of transitioning to a low carbon economy, the location of future national renewable energy generation will, for the most part, need to be accommodated on large tracts of land that are located in a rural setting, while also continuing to protect the integrity of the environment".*

The NPF acknowledges that greenhouse gas emissions from the energy sector must be reduced by at least 80% by 2050 when compared to 1990 levels while ensuring a secure supply of energy exists. New energy systems and the maintenance / safeguarding of existing grid assets will be necessary for a more distributed, renewables focused energy system required to harness Ireland's considerable indigenous energy sources and *"connect the richest sources of that energy to the major sources of demand"*.

The Proposed Project represents a significant multi-million euro investment in a rural area, in the renewable energy industry which is essential for diversifying the energy sector, contributing to innovation in the rural economy and delivering on climate and energy targets. National Planning **Objective 21** of the NPF aims to *'Enhance the competitiveness of rural areas by supporting innovation*

in rural economic development and enterprise through the diversification of the rural economy into new sectors and services, including ICT-based industries and those addressing climate change and sustainability'. The Proposed Project is directly supporting economic growth in rural Co. Carlow and Co. Kilkenny through investment, employment and the community benefit fund, while also contributing to national, regional and local climate and renewable energy targets.

In regard to the above, it is clear that the provision of new renewable energy generation is in line with the aims and objectives of the NPF which seeks to transition to a low carbon economy.

National Development Plan 2021-2030

The National Development Plan 2021 – 2030 (NDP) was published on 4th October 2021 and sets out the major public investment projects identified by Government which are to play a significant role in addressing the opportunities and challenges faced by Ireland over the coming years such as Covid-19, Brexit, housing, health, population growth, and most relevant to the Proposed Project, climate change. It is stated that the NDP 2021 – 2030 will be the *'largest and greenest ever delivered in Ireland'*, and in this regard, the NDP highlights that extensive consultation was undertaken to ensure that the plan adequately supports the implementation of climate action measures. Reflecting on the recent publication of the IPCC's 6th Assessment Report, the NDP notes that the Irish Government is fully committed to 'playing its part' to ensure that the worst climate change damage can be avoided, e.g. significant reductions in CO_2 and other greenhouse gas emissions as assisted by the achievement of both European and National renewable energy targets. Specifically, the NDP states that,

> *"The next 10 years are critical if we are to address the climate crisis and ensure a safe and bright future for the planet, and all of us on it.*
>
> *The investment priorities included in this chapter [Ch. 13] must be delivered to meet the targets set out in the current and future Climate Action Plans, and to achieve our climate objectives. The investment priorities represent a decisive shift towards the achievement of a decarbonised society, demonstrating the Government's unequivocal commitment to securing a carbon neutral future."*

Notwithstanding this, the NDP acknowledges that it is not its role to set out a specific blueprint for the achievement of Ireland's climate targets; but as noted above, facilitate capital investment allocations for the climate and environmental strategic priorities.

One of the NDP's strategic climate priorities in the need for low-carbon, resilient electricity systems; specifically, the plan commits to increasing the share of renewable electricity up to 80% by 2030. This is characterised by the NDP as an '*unprecedented commitment to the decarbonisation of electricity supplies*', which is certainly an ambitious and an explicit driver for the deployment of new renewable generators such as the Proposed Project. The focus of investment in renewable energy infrastructure is to contribute to a long-term, sustainable and competitive energy future for Ireland.

Project Compliance with the National Planning Policy

With regard to the above, it is considered that the Proposed Project is in line with and supported by the National Planning Framework and the National Development Plan.

The National Planning Framework projects a population increase of 1 million people by 2040 and therefore recognises the strain and demand this will put on Irelands energy system. In order to ensure Ireland delivers on our renewable energy and carbon emission reduction targets, the NPF recognises the need for increased renewable energy onto the national grid. This shift from fossil fuels is dependant upon schemes such as the one proposed to generate renewable energy. Given the projected population increase, it is considered that if the share of renewable energy onto the grid is not increased, Ireland will fail to reach the National and International targets on emission reductions. The addition of 7 no.

wind turbines, with an estimated electricity generation capacity of approximately 46.2MW, will significantly contribute to Ireland's national targets and support the country in meeting its renewable energy and carbon emission reduction goals at the EU level. The Proposed Project is directly supported by National Planning Objective 21, 54, and 55.

The National Development Plan 2021 - 2030 is clear in its priority to reach a low-carbon, climate resilient society over the lifetime of the plan. The Proposed Project, if permitted, will provide clean, renewable electricity to the national grid, furthering development objectives of the NDP, namely the target to increase the share of renewable electricity up to 80% by 2030.

2.5.2 Regional Policy Context

Regional Spatial & Economic Strategy for the Southern Region

The Southern Regional Assembly (EMRA) was established in 2015 with a primary focus on the preparation and implementation of Regional Spatial and Economic Strategies (RSES), integration of Local Economic and Community Plans (LECPs), management of EU Operational Programmes, EU project participation, implementation of national economic policy, and working with the National Oversight and Audit Commission. The RSES seeks to achieve balanced regional development and full implementation of Project Ireland 2040 – The National Planning Framework.

"The RSES primarily aims to support the delivery of the programme for change set out in Project Ireland 2040, the National Planning Framework (NPF) and the National Development Plan 2018-27 (NDP). As the regional tier of the national planning process, it will ensure coordination between the City and County Development Plans (CCDP) and Local Enterprise and Community Plans (LECP) of the ten local authorities in the Region."

The RSES is committed to the implementation of the Climate Action Plan 2019 (superseded by CAP 24) by playing its part in the development of wind, wave, tidal, solar, hydro, and bio energy. The ambition is reflected in the Regional Policy Objectives (RPO's) which sets out the key regional policies for the 12-year lifetime of the plan.

RPO 87: Low Carbon Future, states:

"The RSES is committed to the implementation of the Climate Action Plan 2019 by playing its part in the development of renewable energy. This is clearly reflected in the Regional Policy Objectives (RPO's) which sets out the key regional policies for the lifetime of the plan, from 2018 – 2030"

With regards to climate change the RSES notes that:

"All global risks of climate change are risks to the Southern Region. The Southern Regional Assembly is committed to plays its role to put in place a high-level regional strategy for transition to a low carbon economy and society across all sectors."

As noted, and recognised by the RSES, Ireland and the EU are signatories to the Paris Agreement, a legally binding international agreement to restrict global temperature rises to below 2°C above pre-industrial levels, and to limit any increase to 1.5°C to significantly reduce the risks and impacts of climate change. It is further noted that *'Ireland's international commitments also extend to the UN's Sustainable Development Goal 13, to 'take action to combat climate change and its impacts."*

Chapter 5 of the RSES notes detail's the regions plans and objectives with regards to the environment. The RSES focus includes the following areas:

- Renewable Energy

- Energy Efficiency
- Sustainable transport
- Agriculture
- Forestry
- Climate resilience

The following Regional Policy Objectives have been listed with regards to climate change:

> ***RPO 87 Low Carbon Energy Future:*** *The RSES is committed to the implementation of the Government's policy under Ireland's Transition to a Low Carbon Energy Future 2015-30 and Climate Action Plan 2019. It is an objective to promote change across business, public and residential sectors to achieve reduced GHG emissions in accordance with current and future national targets, improve energy efficiency and increase the use of renewable energy sources across the key sectors of electricity supply, heating, transport and agriculture.*
>
> ***RPO 88 National Mitigation Plan and National Adaptation Framework:*** *The RSES is committed to the implementation of the National Mitigation Plan and National Adaptation Framework: Planning for a Climate Resilient Ireland to enable the Region transition to a low carbon, climate resilient and environmentally sustainable economy. It is an objective to ensure effective co-ordination of climate action with the Climate Action Regional Offices and local authorities to implement the National Mitigation Plan and the National Adaptation Framework in the development and implementation of long-term solutions and extensive adaptation measures.*
>
> ***RPO 90 Regional Decarbonisation****: It is an objective to develop a Regional Decarbonisation Plan to provide a framework for action on decarbonisation across all sectors. The Regional Decarbonisation Plan shall include existing and future targets for each sector and shall be prepared with key stakeholders, including the Climate Action Regional Offices, and shall identify the scope and role of the Plan, the requirements for SEA, AA and the timescale for its preparation. Implementation mechanisms and monitoring structures for the Plan should also be established.*

The region has ample resources of wind, solar and ocean energy to provide a significant amount of renewable energy. Over the next ten years there is a predicted growth in electricity demand to align with the Climate Action Plan 2024. Extra generating capacity will be required to accommodate this demand. Wind energy is recognised as a major source of renewable energy generation capable of providing clean electricity to the grid and meeting the county's energy needs.

"The RSES recognises and supports the many opportunities for wind as a major source of renewable energy. Opportunities for both commercial and community wind energy projects should be harnessed, having regard to the requirements of DoHPLG Guidelines on Wind Energy. Wind Energy technology has an important role in delivering value and clean electricity for Ireland."

The following Regional Policy Objectives have been listed with regard to renewable energy:

> ***RPO 95 Sustainable Renewable Energy Generation:*** *It is an objective to support implementation of the National Renewable Energy Action Plan (NREAP), and the Offshore Renewable Energy Plan and the implementation of mitigation measures outlined in their respective SEA and AA and leverage the Region as a leader and innovator in sustainable renewable energy generation.*
>
> ***RPO 96 Integrating Renewable Energy Sources:*** *It is an objective to support the sustainable development, maintenance and upgrading of electricity and gas network grid infrastructure to integrate renewable energy sources and ensure our national and regional energy system remains safe, secure and ready to meet increased demand as the regional economy grows.*

RPO 97 Power Stations and Renewable Energy: *It is an objective to support the sustainable technology upgrading and conversion of power stations in the Region to increase capacity for use of energy efficient and renewable energy sources.*

RPO 98 Regional Renewable Energy Strategy*: It is an objective to support the development of a Regional Renewable Energy Strategy with relevant stakeholders.*

RPO 99 Renewable Wind Energy: *It is an objective to support the sustainable development of renewable wind energy (on shore and off shore) at appropriate locations and related grid infrastructure in the Region in compliance with national Wind Energy Guidelines.*

RPO 100 Indigenous Renewable Energy Production and Grid Injection: *It is an objective to support the integration of indigenous renewable energy production and grid injection.*

Regional Policy **Objectives 95 – 100** reflect the strong support for renewable energy throughout the RSES. The Proposed Project will generate renewable electricity contributing to the objectives of the RSES. The Proposed Project is therefore in alignment with policy at a regional level.

The RSES also acknowledges the need to develop a strong grid to support the integration of renewable energy on to the national electricity grid. The RSES sets out a number of infrastructural RPOs, relevant to the Proposed Project which indicate that the Region is open to, and ready to invest in, renewable energy generation:

RPO 219 New Energy Infrastructure: *New Energy Infrastructure It is an objective to support the sustainable reinforcement and provision of new energy infrastructure by infrastructure providers (subject to appropriate environmental assessment and the planning process) to ensure the energy needs of future population and economic expansion within designated growth areas and across the Region can be delivered in a sustainable and timely manner and that capacity is available at local and regional scale to meet future needs.*

RPO 220 Integrated Single Electricity Market (I-SEM): *It is an objective to support the Integrated Single Electricity Market (I-SEM) as a key priority for the Region and seek the sustainable development and reinforcement of the energy grid including grid connections, transboundary networks into and through the Region and between all adjacent Regions subject to appropriate environmental assessment and planning processes.*

RPO 221 Renewable Energy Generation and Transmission Network:
a) Local Authority City and County Development Plans shall support the sustainable development of renewable energy generation and demand centres such as data centres which can be serviced with a renewable energy source (subject to appropriate environmental assessment and the planning process) to spatially suitable locations to ensure efficient use of the existing transmission network;
b) The RSES supports strengthened and sustainable local/community renewable energy networks, micro renewable generation, climate smart countryside projects and connections from such initiatives to the grid. The potential for sustainable local/community energy projects and micro generation to both mitigate climate change and to reduce fuel poverty is also supported;
c) The RSES supports the Southern Region as a Carbon Neutral Energy Region.

RPO 222 Electricity Infrastructure: *It is an objective to support the development of a safe, secure and reliable supply of electricity and to support and facilitate the development of enhanced electricity networks and facilitate new transmission infrastructure projects that might be brought forward in the lifetime of this plan under EirGrid's (2017) Grid Development Strategy (subject to appropriate environmental assessment and the planning process) to serve*

the existing and future needs of the Region and strengthen all-island energy infrastructure and interconnection capacity.

Project Compliance with Regional Planning Policy

The Southern Regional Assembly states that its region has a crucial role to play in Irelands transition to a low carbon future. In utilising the wind energy resource at Seskin Wind Farm, the Proposed Project will directly contribute to the achievement of a sustainable, secure and resilient energy supply in a manner consistent with the proper planning and sustainable development of the area/region. In the region, a noticeable trend has emerged to recognise and take advantage of emerging opportunities related to the shift towards a decarbonized economy, particularly in the realm of renewable energy generation and therefore the proposal is considered to be in line with Regional Policy.

2.5.3 Local Policy Context

The Proposed Project is located in County Carlow and County Kilkenny. The Proposed Wind Farm including the 7 no. turbines and associated infrastructure, on-site 38kV substation and approximately 2 kilometres (km) of the Proposed Grid Connection Route is located in Co. Carlow. The remaining 18.1 km of the Proposed Grid Connection Route is located within the public road network in Co. Kilkenny, along with Proposed Wind Farm junction accommodation works areas for facilitation of turbine delivery. As such, the relevant policies as set out in the Development Plans for both counties are considered below.

2.5.3.1 Carlow County Council

Carlow County Development Plan 2022-2028

The Carlow County Development Plan 2022-2028 ("CCDP") was adopted in July 2022 and sets out Carlow County Council's policies and objectives for the proper planning and sustainable development of the County. The CCDP details the policies relevant to the development of the Proposed Project including policies and objectives for renewable energy and climate change. The CCDP is in support of national policies regarding renewable energy production.

The aim of the CCDP is as follows *"to combat climate change and its impacts in the County by promoting and supporting policies and objectives which contribute towards a transition to a low-carbon and climate resilient future, and which focus on reducing greenhouse gas emissions and energy demands through appropriate and effective climate mitigation and adaptation measures."*

In relation to Renewable energy the CCDP sets out the following Policy:

> **RE. P1:** *Encourage and facilitate the production of energy from renewable sources, such as from wind, solar, bioenergy, hydroelectricity, and geothermal, subject to compliance with proper planning and environmental considerations.*
>
> ***RE. O1:*** *Seek to achieve a minimum of 130MW of renewable electricity in the County by 2030, by enabling renewable energy developments, and through micro-generation including rooftop solar, wind, hydro-electric and bioenergy combined heat and power (CHP).*

For large scale developments, including wind farms, it is a requirement of Carlow County Council that a green infrastructure plan is prepared and submitted as part of the planning application.

Green infrastructure policy **GI P6** requires "*proposals for large scale developments such as road or drainage schemes, wind farms, solar farms, residential schemes, industrial parks or retail schemes, to submit a green infrastructure plan as an integral part of a planning application.*

The Green Infrastructure Plan for the Proposed Project is further detailed in Section 4.3.9 in Chapter 4 of this EIAR: Description of the Proposed Project, and included as Appendix 4-3 of this EIAR.

In relation to wind energy development section 7.10.3.1 of the CCDP states onshore wind energy is the largest contributor to total renewable energy generation in the County, which reflects the national status of wind energy contribution. There is currently an installed capacity of c. 5.8 MW of onshore wind power in the County. The level of wind energy penetration in the County is low, representing less than 0.1% of the installed national capacity.

Wind Energy Policies of the CCDP are outlined below;

WE. P1: *Have regard to the Department of the Environment, Heritage and Local Government's Guidelines for Planning Authorities on Wind Energy Development (or any update to this document).*

WE. P2: *Support the re-powering of existing wind farms when they come to the end of their operational life, and extensions to existing wind farms, subject to compliance with proper planning and environmental considerations.*

WE. P3: *Support community led wind energy developments or developments with innovative models for community ownership.*

WE. P4: *Wind farm development will not normally be permissible in the Uplands Landscape Type as shown in Figure 6 of the Carlow County Landscape Character Assessment included as Appendix VII to this Plan. This provision shall not apply to micro energy generation and community energy projects as provided for in Section 7.10.3.5, where deemed appropriate and subject to compliance with proper planning and environmental considerations.*

While it is an objective of the Council to:

WE. O1:*Increase the penetration of wind energy generation in County Carlow at appropriate locations and scale and subject to compliance with proper planning and environmental considerations.*

When assessing planning applications for wind energy developments the Council will have regard to the following policy documents:

- Wind Energy Development Guidelines for Planning Authorities (Department of Environment, Housing and Local Government, 2006) and any amendments to the Guidelines which may be made and the Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change (2017)
- Chapter 9 Landscape and Green Infrastructure and Appendix VII Landscape Character Areas with regard to compatibility between the land use and the principal Landscape Character Areas of the County and the proximity to Landscape Sensitivity Factors.

Carlow Renewable Energy Strategy

The Renewable Energy Strategy (RES) for County Carlow contained within the Carlow County Development Plan 2022 - 2028 sets out the Wind Energy Strategy for the County. The strategy sets out development standards for wind energy development in line with the Department of the Environment, Heritage and Local Government's Wind Energy Development Guidelines 2006, including consideration of visual impact, biodiversity, noise and amenity. The strategy then sets out environmentally sensitive areas along with areas throughout the county with capacity for wind energy development in relation to wind speed, proximity to dwellings, substrate conditions, and access to the national grid.

The Landscape Character Assessment for County Carlow, published in 2015, is utilised in the RES to direct the development of wind energy in the County. The Landscape Character Assessment identifies four principal 'landscape character areas' for the County. The County is further defined by the

identification of 'Landscape types'. The Proposed Wind Farm is located in the 'Killeshin Hills' landscape character area, identified as having a 'moderate' capacity for wind farming, and is identified as an 'Uplands' landscape type with a landscape sensitivity rating of 5 out of 5. The Landscape Character Assessment for County Carlow 2015 is outlined in the following section. A full Landscape and Visual Assessment of the Proposed Project is included in Chapter 14 of this EIAR.

With technical and visual constraints considered, the RES makes the following observation in relation to the Killeshin Hills:

'In the western area of the county, in the Killeshin Hills landscape character area, close to border with County Kilkenny, the wind speeds are favourable and there are no environmental designations that preclude wind farm construction. This landscape sensitivity in the area is '5', and 'moderate capacity' for wind farms is indicated in the LCA (2015). However, the constraints mapping suggests that it may be difficult to meet separation distances between wind turbines and dwellings, due to the dispersed settlement pattern in the area.'

Furthermore, the RES states:

'Any proposals for new wind farms would need to include a more detailed site-specific assessment of both technical constraints and landscape/ visual amenity impacts, including potential to impact on the designated Protected Views and Scenic Routes in the County Development Plan.'

The RES includes a wind energy classification policy in which the 'Uplands' areas, in which the Proposed Project is located, are designated as 'Not Normally Permissible' for wind farm development. This classification is due to the fact that these 'Uplands' areas have been assigned the maximum landscape sensitivity rating in the Landscape Character Assessment published in 2015. The RES concludes by presenting an overall working target of wind energy of just 30MW. Electricity output potential from permitted sites, extensions and repowering are allocated 18MW of this target. With the existing 6MW of wind energy factored in, only 6MW remain for new wind energy developments. This represents a very small figure and is not in accordance with national policy that seeks to achieve 9GW (or 9000MW) of onshore wind by 2030. Further analysis of this figure and the wind energy capacity of County Carlow are presented in the Planning Report submitted to Carlow County Council as part of this planning application.

The following policy and objectives are set out in the Renewable Energy Strategy in relation to wind energy:

- **Objective W1**: Increase the penetration of wind energy generation in County Carlow at appropriate location and scale.
- **Policy W1.1**: Proposals for wind farm developments will be determined in accordance with National Wind Energy Development Guidelines and County Development Plan policy framework.
- **Policy W1.2**: Support the re-powering of existing wind farms when they come to the end of their operational life, and extensions to existing wind farms, subject to assessment on a case-by case basis.
- **Policy W1.3** Support community led wind energy developments or developments with innovative models for community ownership.

Landscape Policy

Chapter 9 of the CCDP sets out the relevant policy in relation to 'Landscape and Green Infrastructure', which is based on the findings and recommendations of the 'County Carlow Landscape Character Assessment 2015'. The county is broken down into four major Landscape Character Areas and is further divided by more specific features into landscape types. These specific features often contain more significant and sensitive landscapes that are deemed to be highly valued for scenery and amenity and include a large number of protected views, prospects and scenic routes.

The lands in which the Proposed Wind Farm is located are situated in the Killeshin Hills Landscape Character Areas. The area is almost entirely a rural agricultural landscape with a moderate level of sensitivity and moderate potential capacity to absorb different types of development.

Due to the Killeshin Hills upland character and relative exposure nature, it is considered to have a moderate capacity to absorb wind farm developments, subject to appropriate mitigation measures, for example on farmed secondary ridges where the primary ridge would form the backdrop, or in the lowland farming area. The Landscape Character Assessment makes recommendations for the development of certain sectors with regard the Landscape Character Areas. With regard to the wind energy sector, the Landscape Character Assessment notes:

'In general, wind turbines should be sited away from higher scenic or otherwise valued landscapes, and positioned where their impacts will be considered acceptable. Criteria for the development of wind energy are subject to a separate study'

The landscape types and their associated landscape sensitivity ratings contain more specificity than the broader Landscape Character Areas. The Proposed Wind Farm is located in the 'Uplands' character type. As presented in Figure 2-3 below, these 'Uplands' areas are designated as the highest landscape sensitivity in the county with a landscape sensitivity rating of 5 out of 5. The landscape sensitivity mapping is informed by the Landscape Character Areas, Landscape Types and the views, prospects and scenic routes. Landscape sensitivity is defined as a measure of *'the ability of the landscape to accommodate change or intervention without suffering unacceptable loss of character or value'*.

	SENSITIVITY				
	1 Least	2 Decreasing	3 Moderate	4 Increasing	5 Most
Built up areas					
Farmed Lowland				*	
Broad River Valley					
Farmed Ridges					
Narrow River Valley					
Rolling Rough Grazing					
Uplands					

Figure 2-3: Landscape sensitivity rating (Carlow Landscape Character Assessment 2015)

The land use capacity matrix identifies the Killeshin Hills, in which the Proposed Wind Farm is located, as having a moderate capacity for wind farm development. The land use zoning matrix is show in Figure 2-4 below.

Land Use type	Mount Leinster - Blackstairs	Central lowlands	River Slaney - East Rolling Farmland	Killeshin Hills
Agriculture	Low	High	High	High
Rural housing	Low	Moderate	Low	Low
Urban development/expansion	Low	Moderate	Moderate	Low
Forestry Plantation	Moderate	Moderate	Moderate	Moderate
Tourism related activity*	High	High	High	High
Industrial development	Low	Low	Low	Low
Extractive industry	Low	Moderate	Moderate	Moderate
Wind farming	Low	Moderate	Moderate	Moderate

Figure 2-4: Land use capacity matrix (Carlow Landscape Character Assessment 2015)

The CCDP does however acknowledge the locational requirements of wind energy developments and facilitates their development where visual impacts can be minimised or mitigated. The following policy is included in Chapter 9 of the CCDP:

LA P7: *Facilitate, where appropriate, developments that have a functional and locational requirement to be situated on steep or elevated sites (e.g. reservoir, telecommunication masts or wind energy structures) where residual adverse visual impacts are minimised or mitigated.* (emphasis added)

It is clear from the landscape policies that there is policy support for the Proposed Wind Farm, given its functional requirement to be situated on an elavated site and its location within the Killeshin Hills. Further analysis of the landscape policies set out in the CCDP is provided in the Planning Report submitted to Carlow County Council as part of this application.

2.5.3.2 Compliance with Carlow County Development Plan

It is submitted that the Proposed Project is consistent with the provisions of the CCDP. There is policy support for the location of wind energy developments on elevated sites where there is a functional and location requirement. Furthermore, the Killeshin Hills is considered to have a 'moderate' capacity to absorb wind energy. For these reasons, the principle of development should be considered to be acceptable.

As presented in the Planning Report which accompanies this application, it is evident that the allocated target for new wind energy of just 6MW is not consistent with national policy such as CAP 24. The NNP wind energy calssification, based solely on a landscape designation, fails to consider the 'Available areas' identified as part of the 'Technical Analysis and Mapping Exercise' in the RES. It is demonstrated in the Wind Energy Capacity Assessment (Section 7 of the Planning Report), that County Carlow has the potential to reach an installed capacity of c. 150MW by 2030. This figure is more closely aligned with the level of wind energy development required to meet the national wind energy target of 9GW and to stay with legally binding carbon budgets.

It is submitted that the NNP wind energy classification is overly restrictive when considered in national and international context. The Proposed Seskin Wind Farm site is suitable for wind energy development, as evident by the conclusions made throughout this EIAR. It is therefore considered that the Proposed Project is consistent with the provisions of the Carlow County Development Plan 2022 - 2028.

2.5.3.3 Kilkenny County Council

Kilkenny City and County Development Plan 2021-2027

The Kilkenny City and County Development Plan 2021-2027 ("KCDP") was adopted on 15th October 2021. The KCDP outlines the overall strategy for the proper planning and sustainable development of County Kilkenny. The KCDP includes a dedicated Wind Energy Strategy. While the Proposed Wind Farm is not located within the administrative area of Kilkenny County Council, a portion of the Proposed Grid Connection Route, along with the Proposed Wind Farm junction accommodation works areas for facilitation of turbine delivery. As such, planning applications will be lodged concurrently to Carlow and Kilkenny County Council to seek permission for the Proposed Grid Connection Route. As such it is important to consider the implications of the provisions of the KCDP on the Proposed Project.

In relation to electricity, the KCDP recognises that there is a need to increase electrical infrastructure capacity and security.

'The Council will support the development of a safe, secure and reliable supply of electricity and to support and facilitate the development of enhanced electricity networks and facilitate new transmission infrastructure projects that might be brought forward in the lifetime of this plan'

The KCPD states that Kilkenny County Council will facilitate the provision of energy networks in principle, provided that it can be demonstrated that:

- the development is required in order to facilitate the provision or retention of significant economic or social infrastructure;
- the route proposed has been identified with due consideration for social, environmental and cultural impacts;
- the design is such that will achieve least environmental impact;
- the lines should be planned to avoid areas of high landscape sensitivity;
- preference should be given to undergrounding services where appropriate;
- the proposed infrastructure complies with all internationally recognised standards with regard to proximity to dwellings and other inhabited structures including best practice and new accepted research on the impacts on health;
- new power lines and power installations should be sited in accordance with the requirements of the "Health Effects of Electromagnetic Fields" Report issued by the Department of Communications, Marine and Natural Resources in 2007, and
- where impacts are inevitable, mitigation features have been included.
- where considered necessary by the Council, a Visual Impact Assessment and a Landscape Impact Assessment will be required for significant Grid Infrastructural projects.
- That existing grid infrastructure should be used where possible in preference to erecting new grid infrastructure.
- Any proposed development must avoid impact on any Special Area of Conservation.

Kilkenny County Council also make a provision for developments which traverse county boundaries, such proposals will be considered in light of the criteria above and will be treated by the Council as if it were required to service a development within Kilkenny County Council.

Kilkenny Wind Energy Policy

The Kilkenny Wind Energy Development Strategy 2021 was prepared in conjunction with the CDP 2021-2027, however, due to a Ministerial Direction issued on the 15th of October 2021 in accordance with 31(4) of the Act, the following sections shall be taken not to come into the effect:

- 11.4 Kilkenny Targets Section
- 11.5.1 Current Status and Targets Figure

- 11.4 Wind Strategy Areas.

Regardless, both the expired 'Wind Energy Development Strategy 2014-2020' and 'Appendix K - Wind Energy Development Strategy 2021' identify the area adjoining County Carlow, closest to the Proposed Wind Farm, as a preferred area for wind energy development.

The 'Wind Energy Development Strategy 2014-2020' summarises the potential for wind energy in the Coolcullen area, less thne 5km from the Proposed Wind Farm. It states that *'the nearest settlement to this area is Old Leighlin, 5km away'* and that '*there are no special landscape or heritage considerations'*. The more recent 'Wind Energy Development Strategy 2021', although not in effect, categorises the area as 'Acceptable in Principle'. Areas 'Acceptable in Principle' are described as:

'This is the preferred area for wind energy development, characterised by high wind speeds, and no significant conflict with environmental designations or sensitivities.'

Wind farm grid connections are considered to be a part of wind farm projects. Therefore, the Proposed Grid Connection in Co. Kilkenny is considered to be 'Acceptable in Principle' in terms of the principle of development in this area.

2.5.3.4 Compliance with the Kilkenny County Development Plan

Having regard to the above, it is clear there is strong policy support for wind energy development and associated infrastructure at a local level and a commitment to shift to a low carbon economy and away from using fossil fuels. Consequently, the Proposed Project will further contribute to decarbonisation of energy and will further contribute to the national, regional renewable energy and emissions reduction targets. Furthermore, it is the policy of the Kilkenny County Council to support the transmission and distribution of renewable electricity. Kilkenny County Council also designate the area of County Kilkenny closest to the Proposed Wind Farm as 'Acceptable in Principle'. Therefore, the Proposed Project is considered compliant with the relevant provisions of the Kilkenny City and County Development Plan 2021-2027.

2.5.4 Other Relevant Material Considerations

DoEHLG Wind Energy Guidelines 2006

In June 2006, the then Department of Environment, Heritage and Local Government (DoEHLG) published '*Wind Energy Development Guidelines for Planning Authorities'* (the 'DoEHLG 2006 Guidelines') under Section 28 of the Planning and Development Act, 2000 (as amended). The aim of these guidelines was to assist the proper planning of wind power projects in appropriate locations around Ireland. The DoEHLG 2006 Guidelines highlight general considerations in the assessment of all planning applications for wind energy. They set out advice to planning authorities on planning for wind energy through the development plan process and in determining applications for planning permission. They contain guidelines to ensure consistency of approach throughout the country in the identification of suitable locations for wind energy development.

Each wind project has its own characteristics and defining features, and it is therefore impossible to write specifications for universal use. Guidelines should be applied practically and do not replace existing national energy, environmental and planning policy. While the DoEHLG 2006 Guidelines remain the relevant guidelines in place, at the time of lodgement, decision makers (Planning Authorities and An Bord Pleanála) are not bound to their provisions and they can (and do) consider updated standards/requirements/specifications in assessing impacts and the proper planning and sustainable development of the area. The Proposed Project adheres to the DoEHLG 2006 Guidelines.

Draft Revised Wind Energy Guidelines 2019

The Department of Housing, Planning and Local Government published the *Draft Wind Energy Guidelines* (referred to as the 'Draft 2019 Guidelines') in December 2019. The Draft 2019 Guidelines were open to public submissions up until the 19th of February 2020. These submissions are now being considered by the Department. At time of writing, the guidelines in place remain the DoEHLG 2006 Guidelines pending the Department publishing a final version of any revised guidance.

The Draft 2019 Guidelines clearly sets out the recognition that the proper planning and sustainable development of areas and regions must be taken into account when local authorities prepare their development plans and assess planning applications, irrespective of the significant role renewable energy has to play in tackling climate change.

The Draft 2019 Guidelines note that potential impacts of wind energy development proposals on the landscape, including the natural and built environment, must be considered along with the legitimate concerns of local communities. With this in mind, and in line with the previously stated "preferred draft approach", the Draft 2019 Guidelines primarily focus on addressing a number of key aspects including, but not limited to:

- Acceptable noise thresholds and monitoring frameworks;
- Visual amenity setback;
- Control of shadow flicker;
- Compliance with Community consultation and dividend requirements, as included within the obligatory Community Report; and
- Consideration of the siting, route and design of the proposed grid connection as part of the whole project.

The design of the Proposed Project has taken account of the *"preferred draft approach"* as articulated by the Department in June 2017, and accordingly, has been developed with the provisions of the Draft 2019 Guidelines in mind (for example in relation to 4 times turbine tip height set back distance from third party sensitive receptors).

The submission period for the Draft 2019 Guidelines closed in February 2020. Under the consultation it was evident that a number of submissions made appeared to have observations surrounding similar points, these include but are not limited to themes such as noise, visual amenity set back and shadow flicker. With regards to noise, a number of the received submissions noted that the provisions put forward in the Draft 2019 Guidelines were unworkable, as such it was considered that should the noise measures be implemented there is the potential for an on-going impact on the development of onshore wind energy in the future. In relation to set back distances there was strong criticism with regards to this distance being measured to the curtilage of a property due to this measurement being ambiguous and difficult to implement. Furthermore, questions were raised surrounding the strict measures which have been put in place surrounding shadow flicker, the Draft 2019 Guidelines put forward the provision that '*there will be no shadow flicker at any existing nearby dwelling or other relevant existing affected sensitive property*'. While the overall provision is possible a number of clarifications were sought to ensure that this provision could be implemented in a reasonable manner.

At time of writing the Draft 2019 Guidelines are not yet finalised and are not in force, with the relevant guidelines for the purposes of section 28 of the Planning and Development Act 2000 (as amended) remaining those published in 2006. Notwithstanding this, however, due to the timelines associated with the planning process for renewable energy projects it is possible that an updated version of the Draft 2019 Guidelines may be finalised during the consideration period for the current Proposed Project. Towards this end, on the basis of the details available from the Draft 2019 Guidelines, it is anticipated that the Proposed Project will be capable of adhering to the relevant noise and shadow flicker standards, albeit without sight of the final, adopted guidelines, the processes by which the Proposed Project will comply with the same cannot be confirmed at this stage. While the final guidelines have not

yet been published it should be noted that the Proposed Wind Farm maintains a four times tip height set back between turbines and residential properties and furthermore detailed community consultations have been carried out.

Department Circular PL5/2017

On the 3rd of August 2017, the (then) Department of Housing, Planning and Local Government issued Circular PL5/2017 to provide an update on the review of the wind energy and renewable policies in development plans, and the advice contained within a previous Departmental Circular PL20-13. Circular PL20-13 advised that local authorities should defer amending their existing Development Plan policies in relation to wind energy and renewable energy generally as part of either the normal cyclical six-yearly review or plan variation processes and should instead operate their existing development plan policies and objectives until the completion of a focused review of the Wind Energy Development Guidelines 2006 (the DoEHLG 2006 Guidelines). The new circular (PL05/2017) reconfirms that this continues to be the advice of the Department.

The Circular also sets out the four key aspects of the *preferred draft approach* being developed to address the key aspects of the review of the DoEHLG 2006 Guidelines as follows:

- The application of a more stringent noise limit, consistent with World Health Organisation noise standards, in tandem with a new robust noise monitoring regime, to ensure compliance with noise standards;
- A visual amenity setback of 4 times the turbine height between a wind turbine and the nearest residential property, subject to a mandatory minimum distance of 500 metres between a wind turbine and the nearest residential property;
- The elimination of shadow flicker; and
- The introduction of new obligations in relation to engagement with local communities by wind farm developers along with the provision of community benefit measures.

IWEA Best Practice Guidelines for the Irish Wind Energy Industry 2012

The Irish Wind Energy Association (IWEA) (now Wind Energy Ireland) published updated Wind Energy Best Practice Guidelines for the Irish Wind Industry in 2012. The guidelines aim to encourage and define best practice development in the wind energy industry, acting as a reference document and guide to the main issues relating to wind energy developments. The purpose of the guidelines is to encourage responsible and sensitive wind energy development, which takes into consideration the concerns of local communities, planners, and other interested groups. The guidelines outline the main aspects of wind energy development with emphasis on responsible and sustainable design and environmental practices, on aspects of development which affect external stakeholders, and on good community engagement practices. In approaching the development of IWEA's guidelines the aim was to be complementary to the DoEHLG 2006 Guidelines.

IWEA Best Practice Principles in Community Engagement and Community Commitments 2013

IWEA extended its guidance with the publication of this Best Practice in Community Engagement and Commitment. IWEA and its members support the provision of financial contributions by wind farm operators to local communities and have sought to formulate best practice principles for the provision of a community commitment. The document sets out IWEA's best practice principles for delivering extended benefits to local communities for wind farm developments of 5 Megawatts (MW) or above. Best Practice Principles of community engagement when planning the engagement strategy and preparing associated literature are also outlined in the document. The aim of these guidelines is to

ensure that the views of local communities are taken into account at all stages of a development and that local communities can share in the benefits.

Further details on the community engagement that has been undertaken as part of the Proposed Project are presented below.

DCCAE Code of Practice for Wind Energy Development Ireland – Guidelines for Community Engagement 2016

In December 2016, the Department of Communications, Climate Action and Environment (DCCAE) issued a Code of Practice for wind energy development in relation to community engagement. The Code of Good Practice is intended to ensure that wind energy development in Ireland is undertaken in adherence with the best industry practices, and with the full engagement of local communities.

Community engagement is required through the different stages of a project, from the initial scoping, feasibility and concept stages, right through construction to the operational phase. The methods of engagement should reflect the nature of the project and the potential level of impact that it could have on a community. The guidelines advise that ignoring or poorly managing community concerns can have long-term negative impacts on a community's economic, environmental or social situation. Not involving communities in the project development process has the potential to impose costly time and financial delays for projects or prevent the realisation of projects in their entirety.

Commission for Regulation of Utilities: Grid Connection Policy

The Commission for Regulation of Utilities (CRU) (previously the Commission for Energy Regulation (CER)) launched a new grid connection policy in March 2018 for renewable and other generators, known as Enduring Connection Policy Stage 1 (ECP-1), which seeks to allow *"shovel ready"* projects that already have a valid planning permission, connect to the electricity networks. The principal objective which guides this decision is to allow those projects to have an opportunity to connect to the network, along with laying the foundations for future, more regular batches for connection. Applicants for new connection capacity under ECP-1 was published in August 2019 and under ECP-2 published in September 2020. The ECP-2 framework established a batch application window of the month of September for three years. The final application window under ECP-2 in September 2022 is the most recent grid connection window.

The enduring connection policy regime replaces the previous 'Gate' system of grid connection applications. The grid connection application window under ECP-1 was the first time since 2007 that certain renewable energy projects including wind farms had an opportunity to secure a new grid connection offer.

Renewable Energy Support Scheme

The Climate Action Plan 2019 (CAP 2019) is the Government's plan to give Irish people a cleaner, safer and more sustainable future. CAP 2019 set out actions across every sector which will ensure we meet our future climate commitments. A key part of CAP 2019 was a move to 70% renewable electricity by 2030, a measure which will be driven by the introduction of the Renewable Electricity Support Scheme ('RESS'). RESS also plays a pivotal role in the ambitions of the Programme for Government, along with the most recent Climate Action Plan 2024 in which Ireland's renewable energy target is at least 80% renewable electricity by 2030.

The RESS is an auction-based scheme which invites renewable electricity projects to bid for capacity and receive a guaranteed price for the electricity they generate.

The Auction Scheme and the ECP framework has now been established and is operational and will facilitate and provide a pathway to realise renewable electricity (RES-E) ambition of up to 80% by 2030, that has been established.

2.6 Planning History

2.6.1 Planning Applications within the application site boundary

A planning search was carried out through Carlow and Kilkenny County Council's online planning portal in April 2024 for relevant planning applications within the red line planning application site boundary. 1 no. of extant permissions was identified in County Carlow and 3 no. of extant permissions were identified in County Kilkenny. 1 no. Strategic Infrastructure Development (SID) was also identified. This SID application relates to works at Black Bridge, part of the White Hills wind farm application. The planning applications within the red line boundaries in County Carlow and County Kilkenny are outlined in Table 2-3 ad Table 2-4 below.

Table 2-3: Planning Applications within the red line boundary in Co. Carlow

Pl. Ref.	Planning Authority	Description	Decision
2360220	Carlow County Council	1. The erection of a temporary 100m high lattice type meteorological mast for a period of 5 years which will be fixed to ground anchors by stay wires and will include instruments for measuring local climate conditions and services. 2. The proposed works also include a hardstanding area and all ancillary works	Further Information Required 20/11/2023
ABP: 315365	An Bord Pleanála	Wind energy development consisting of 7 no. wind turbines and all associated works.	Granted permission on the 21/11/2023

Table 2-4: Planning Applications within the red line boundary in Co. Kilkenny

Pl. Ref.	Planning Authority	Description	Decision
2360382	Kilkenny County Council	Kilderry Solar Farm Ltd. seeks a 10 year planning permission with an operational lifetime of 40 years from the date of commissioning for the development of a ground mounted solar array as well as national grid connection and all ancillary works in the townland of Kilderry, and adjoining townlands of and adjoining town lands of Scart, Ballynamona, Rathgarvan (or Clifden), Churchclara, Clarabricken, Clara Upper, Clara, Kilmagar, Feathallagh and Ballysallagh, Co. Kilkenny.	Further Information Required 25/08/2023
22487	Kilkenny County Council	the development will consist/consists of: Laying of underground 38kV medium voltage electrical cables with associated ducting, 7 no. joint bays, with associated communication chambers and ancillary development within the R172, L2646, L2631, L67062 and L2633 public roads and private lands South of the R172. The cable will run for a distance of 5,710m. Approximately 4890 metres of this will be within the public road and approximately 820 metres of cabling will be on private lands located South of the R172 and on lands of the permitted Clashwilliam Solar Farm. The cable will transverse under the Irish Rail	Granted permission on the 30/01/2023

		Railway within the townland of Highrath and the M9 motorway in the townland of Roughfield through trenchless Horizontal Directional Drilling (HDD) methods. The underground cable is intended to connect the permitted 38kV substation in Clashwilliam Solar Farm, in Smithstown townland, with the Kilkenny 110kV ESB substation, in Scart townland. The solar farm and 38kV substation were granted permission by Kilkenny County Council pursuant to Planning Registration Reference 20897). Permission is sought for a period of 10 years. A Natura Impact Statement (NIS) will be submitted to the Planning Authority with this Application.	
18573	Kilkenny County Council	For develop at existing Grt Isl-Kk 110kV Overhead Line, approx 49kms long.Approx 46.4km of existing circuit located within functional area of CoKk with approx 2.6km located within CoWex.The uprate works within CoKk will be undertaken betwn structure INT16 in townland of Drumdowney Upr,near admin border betwn Co's Wx&Kk and structure EM258 in twnland of Scart(ED Dunbell),east of KkCity	Granted permission on the 08/03/2019
ABP: 315365	An Bord Pleanála	Wind energy development consisting of 7 no. wind turbines and all associated works.	Granted permission on the 21/11/2023

2.6.2 Wind Energy Developments within 25km

A planning search was carried out to establish permitted and operational wind farms within 25km of the Proposed Wind Farm turbines. The search was carried out using the relevant local authority planning portals in April 2024 for relevant planning applications. In total, 18 wind energy applications within 25km were identified.

Table 2-5: Wind farm developments within 25km of Proposed Wind Farm turbines

Pl. Ref.	Applicant	County	Wind Farm	Description	Decision	Status	Turbine No.
PL11.248518 22507	Pinewood Wind Limited	Laois County Council	Pinewoods Wind Farm	11 wind turbines, electricity substation, switch room, equipment compound, site access tracks, 7 site entrances, meteorological mast, upgrade of road junction.	Granted permission with conditions 03/09/2017	Permitted	11
PL01.318295 22340	Boolyvannanan Renewable Energy Ltd	Carlow County Council	Bilbao Wind Farm	Five wind turbines (overall tip height of 136.5m), met mast, tracks, sub-station, temporary compound, hardstanding, laydown area, control building, cabling, up to 18 hectares of forestry, and associated works.	Case is due to be decided by 05/03/2024	Planning Appeal	5
ABP-315365-22	White Hill Wind Limited	Carlow County Council	White Hill Wind farm	Construction and operation of a 7 turbine wind farm and all associated ancillary infrastructure and developments.	Granted permission with conditions 21/11/2023	Permitted	7
PL Ref. 04/935	Eco Developments Ltd	Laois County Council	Gortahile Wind Farm	Erect 7 no. wind turbines, up to 80m hub height & up to 45m blade length, access roads, control building & ancillary site works	Granted on 27/10/2004	Operating	7
PA11.317809	Coolglass Wind Farm Ltd	Laois County Council	Coolglass Wind Farm	Construction of 13 No. wind turbines within two clusters and ancillary works.	Case is due to be decided by 20/02/2024	Proposed	13

PL Ref. 99/851	Joseph & Noel Deacon	Carlow County Council	Greenoge/ Kilbranish	Construction of a 4 M. Watt wind farm	Granted on 07/01/2001	Operating	1
11/280	Kilbranish Windfarm Ltd.	Carlow County Council	Kilbranish Windfarm	To erect a wind turbine, site roads, electricity substation, and ancillary works in the townland of Kilbrannish North, Bunclody, Co. Carlow. The turbine will have a maximum hub height of 80m and a maximum rotor diameter of 90m. The anticipated output will be 2.5mw.	Granted on 19/06/2012	Operating	1
081511	Matt Bergin & Thomas McEvoy	Kilkenny County Council	Lisdowney Wind Farm	For development which will consist of 4 wind turbines with service roadways, electrical control and transformer compound and anemometer. The application is accompanied by an Environmental Impact Statement	Granted on the 28/01/2010	Operating	4
12172	Lisdowney Wind Farm Ltd	Kilkenny County Council	Lisdowney Wind Farm	for a modification for the redesign of a previously approved development at site address Lisdowney, Ballyragget, Co. Kilkenny planning reference no 08/1511. The previously approved development consisted of a wind farm with 4 turbines, a meteorological mast, electrical control transformer building, burrow pit and associated site roads. The proposed revision is to optimise the layout of the 4 turbines and associated road infrastructure and associated ancillary works and increase the hub height from 64m up to a hub height of 80m and increase the maximum blade tip height from 99.5m to 121.5m. Permission is being sought for a 10 year period. An environmental impact statement (EIS) and natura impact statement (NIS) accompany this application	Granted on the 23/07/2012	Operating	4

ABP-317589-23	EDF Renewables Ireland Limited	Kilkenny County Council	Freneystown Wind Farm	Proposed Renewable Energy Development of 8 wind turbines and all associated works	Consultation has yet to be concluded	Pre-Application	8
PL Ref. 13256	Ballon Meats	Carlow County Council	Ballon Meats Wind Turbine	Erect a 500kw wind turbine 80 metre high with a blade diameter of 39 metre, a new access roadway connecting to existing private road with underground ducting connecting to existing ESB Substation, and all associated site works.	Granted on 14/03/2014	Operating	1
ABP: PL01.314517 and PL Ref. 21254	Joe Hughes	Carlow County Council	Kildreenagh Wind Turbine	Permission for the erection of 1 No. wind turbine (hub height 65m, blade length 23.5m), and the construction of a 25.00 sq. m electrical substation, site access road, and all ancillary works.	Granted on 12/09/2023	Permitted	1
PL Ref. 20/46 and Ref. No. PL01.243964 (13/322)	Jerry Bolger	Carlow County Council	Kilcarrig Turbine	The erection of 1 No. 660kw wind turbine (hub height 45.00m), and the construction of a 25.00 sq.m. electrical sub-station, site access road, and all ancillary works, as per development previously granted by An Bord Pleanála on foot of File Ref. No. PL01.243964(13/322). The planning permission sought shall be for a period of fifteen years from the date of commissioning of the wind turbine which is an amendment to condition No. 2 of previous permission Pl01.243964 authorising ten years from the date of commissioning of the wind turbine	Granted on 21/07/2020	Permitted	1
PL Ref. 22/368	Tullow Mushroom Growers Limited	Carlow County Council	Tullow Wind Turbine	for the demolition of a wind turbine of 150kw that was erected with planning ref. number 09125 and apply for Planning Permission to erect a 500kw wind turbine, located at the south-east corner of our land, with a hub height of 65 meters and a blade diameter of 44 meters, with underground ducting connecting to existing ESB substation and all associated site works	Granted on the 05/12/2023	Permitted	1

PC10.316156	Ecopower Developments	Kilkenny County Council	Fassa Windfarm	Proposed development of Fassa Windfarm which comprises between 13 and 20 wind turbines along with meteorological masts, access roads, an electrical substation and related ancillary works. A grid connection to either Pinewood 110kV substation or Ballyragget 110kV substation will be included in the planning application.	Consultation has yet to be concluded	Pre-Application	13-20
ABP: PL01.318705 (Reactivated case, Old Ref: 309937)	Coillte CGA	Carlow County Council	Croaghaun Wind Farm	10 year planning permission and 35 year operational life for wind farm. An Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared.	Case is due to be decided by 29/04/2024	Planning Appeal	7
ABP: PC10.312016	Rowanmere Limited	Kilkenny County Council	Ballynalacken Windfarm	Proposed Ballynalacken Windfarm comprising of nine wind turbines of .6MW/6.5MW installed capacity each, meteorological mast, access roads electrical substation compound and control buildings, grid connection and all associated works.	Is a Strat. Infrast. Dev. 03/04/2023	Pre-application	9
ABP: PC10.313780	Ecopower Developments	Kilkenny County Council	Gathabawn Wind Farm	Windfarm development comprising between 13 and 18 wind turbines	Is a Strat. Infrast. Dev. 12/10/2022	Pre-application	13 - 18

2.7 Scoping and Consultation

2.7.1 Scoping

Scoping is the process of determining the content, depth and extent of topics to be covered in the environmental information to be submitted to a competent authority for projects that are subject to Environmental Impact Assessment (EIA). This process is conducted by contacting the relevant authorities and Non-Governmental Organisations (NGOs) with interest in the specific aspects of the environment with the potential to be affected by the proposal. These organisations are invited to submit comments on the scope of the EIAR and the specific standards of information they require. Comprehensive and timely scoping helps ensure that the EIAR refers to all relevant aspects of the Proposed Project and its potential effects on the environment and provides initial feedback in the early stages of the design iteration process. In this way scoping not only informs the content and scope of the EIAR, it also provides a feedback mechanism for the proposal design itself.

A scoping report, providing details of the Proposed Project, was prepared by MKO and circulated in December 2022. MKO requested the comments of the relevant personnel/bodies in their respective capacities as consultees with regards to the EIAR process. As part of the constraints mapping process, which is detailed in Section 3.2.6.1 of Chapter 3 of this EIAR, telecommunications operators were contacted in May 2022 in order to determine the presence of telecommunications links either traversing or in close proximity to the Proposed Wind Farm.

2.7.2 Scoping Responses

Table 2-6 lists the responses received from the bodies to the scoping document circulated in December 2022. Copies of all scoping responses are included in Appendix 2-1 of this EIAR. If further responses are received, the comments of the consultees will be considered in the construction and operation of the Proposed Project in the event of a grant of planning permission. The recommendation of the consultees has informed the project design and scope of assessments undertaken and the contents of the EIAR.

Table 2-6: Scoping List and Responses

Ref	Consultee	Date of Response
1	An Taisce	21/12/2022
2	Bat Conservation Ireland	No Response
3	Bird Watch Ireland	No Response
4	Broadcasting Authority Ireland	06/01/2023
5	Butterfly Conservation Ireland	No Response
6	Commission for Regulation for Utilities, Water and Energy	No Response
7	Carlow County Council- Operations Department	23/03/2023
8	Carlow County Council- Heritage Department	23/03/2023
9	Department for Agriculture, Food and the Marine	24/02/2023
10	Department for Defence	02/02/2023
11	Department of Environment, Climate and Communications	No Response
12	Department of Housing, Local Government and Heritage	27/01/2023
13	Department of Tourism, Culture, Arts, Gaeltacht, Sport, and Media	No Response
14	Department of Transport	05/01/2023
15	EirGrid	No Response

16	ESB Networks	No Response
17	Failte Ireland	18/01/2023
18	Geological Survey of Ireland	08/02/2023
19	Health Service Executive	27/01/2023, 31/01/2023
20	Inland Fisheries Ireland	12/01/2023
21	Irish Aviation Authority	11/01/2023, 18/01/2023
22	Irish Peatland Conservation Council	No Response
23	Irish Raptor Study Group	No Response
24	Irish Red Grouse Association	No Response
25	Irish Water	01/02/2023
26	Irish Wildlife Trust	No Response
27	Kilkenny County Council – Roads Department	18/01/2023
28	Kilkenny County Council- Planning Department	18/01/2023
29	Kilkenny County Council – Environment Department	18/01/2023
30	Kilkenny County Council – Heritage Officer	No Response
31	National Parks and Wildlife Service	27/01/2023
32	Office of Public Works	No Response
33	SE Lawpro	26/01/2023
34	Transport Infrastructure Ireland	23/12/2022
35	The Heritage Council	No Response
36	Waterways Ireland	No Response

Table 2-7 sets out the detail of Telecommunication consultation responses received. The responses received were fully considered and issues raised where followed up through contact with the respondent where clarification was necessary and addressed throughout the EIAR.

Table 2-7: Telecommunications Scoping and Responses

Ref	Consultee	Date of Response
1	Airwire	No Response
2	Ajisko Ltd.	10/05/2022
3	Broadcasting Authority of Ireland	11/05/2022
4	BT Communications Ireland	24/05/2022
5	Commission for Communications Regulation	17/05/2022
6	Eir	13/05/2022
7	EirGrid	No Response
8	Enet	10/05/2022
9	ESB Telecoms	No Response
10	Imagine Group Communications	10/05/2022
11	Lighthouse Networks Limited	10/05/2022
12	Ripple Communication Ltd.	No Response
13	RTE Transmission Network	10/05/2022
14	TETRA Ireland Communications Ltd.	No Response
15	Three Ireland Ltd.	01/06/2022
16	Towercom	11/05/2022
17	Viatel Ireland Ltd.	No Response
18	Virgin Media Ltd (previously UPC)	No Response

19	Vodafone Ireland Ltd.	11/05/2022

Table 2-8 below provides a summary of the details received from the consultees. The table also identifies the relevant chapter where the points raised by each of the consultees are addressed.

Table 2-8: Consultee responses and relevant chapters

Consultee	Points raised by consultee	Addressed in Chapter
Carlow County Council	Scoping response provided was organised under the following headers: › Grid Connection and Cumulative Impacts › EIAR: General Structure › County Planning Policy › Natural Heritage › Archaeological Heritage › Impacts on Residential Amenity and Adjoining Land Uses › Land & Soil › Noise, Vibration and Dust › Flora and Fauna › Water Quality › Surface Water Drainage › Traffic and Transportation › Ecological Surveys › Ground & Habitat Surveys › Embedded Design › In-combination Effects › Consultation Full descriptions of points raised by Carlow County Council can be found in Appendix 2-1 Scoping Responses.	Chapter 1 Introduction Chapter 2 Background Chapter 3 Reasonable Alternatives Chapter 5 Population and Human Health Chapter 6 Biodiversity Chapter 7 Ornithology Chapter 8 Lands, Soils and Geology Chapter 9 Water Chapter 10 Air Chapter 11 Climate Chapter 12 Noise Chapter 13 Cultural Heritage Chapter 14 Landscape and Visual Chapter 15 Material Assets

Department for Agriculture, Food and the Marine	› If the proposed development will involve the felling or removal of any trees, the developer must obtain a Felling License from this Department before trees are felled or removed.	Chapter 4 Description
Department for Defence	› If this proposed development was to go to the planning stage, the Department of Defence would be obligated to raise the following concerns and advise the planning authorities that: 1. *The proposed windfarm lies within 3 nautical miles of the M9 which is identified as a critical low level route used by state aircraft on operational tasking's.* 2. *A wind farm or any other tall structure within a low-level route will be an obstacle to state aircraft not operating within the civil rules of the air.*	Chapter 15 Material Assets
Department of Transport	› The proposed development, especially the connection cables to national grid will have effects on both the environment and the Regional and local road network. Examining mitigating disruptions to local and national road networks. Ensure when applying conditions to any approval that local authorities are informed of the route chosen for cables in public road spaces, developer must comply with standards. Avoid bridge structures and notify road authorities of cables owners/ providers.	Chapter 15 Material Assets Appendix 15-2 Traffic Management Plan
Failte Ireland	› Please see attached a copy of Fáilte Ireland's Guidelines for the Treatment of Tourism in anEIA, which you may find informative for the preparation of the Environmental ImpactAssessment for the proposed project. The purpose of this report is to provide guidance for those conducting Environmental Impact Assessment and compiling an Environmental ImpactAssessment Reports (EIAR), or those assessing EIARs, where the project involves tourism ormay have an impact upon tourism. These guidelines are non-statutory and act as supplementary advice to the EPA EIAR Guidelines outlined in section 2.	Chapter 5 Population and Human Health
Geological Survey of Ireland	› The Groundwater Data Viewer indicates several aquifers classed as a 'Locally Important Aquifer - Bedrock which is Generally Moderately Productive', a 'Poor Aquifer - Bedrock which is Generally Unproductive ', a 'Poor Aquifer - Bedrock which is Generally Unproductive except for Local Zones', a 'Regionally Important Aquifer - Karstified (diffuse)' and a 'Locally Important Aquifer - Bedrock which is Moderately Productive only in Local Zones' underlie the proposed wind farm and grid connection route. Should development go ahead, all other factors considered, Geological Survey Ireland would much appreciate a copy of reports detailing any site investigations carried out.	Chapter 8 Land, Soils and Geology Chapter 9 Water

	› The Groundwater Vulnerability map indicates the range of groundwater vulnerabilities within the area covered is variable. We would therefore recommend use of the Groundwater Viewer to identify areas of High to Extreme Vulnerability and 'Rock at or near surface' in your assessments, as any groundwater-surface water interactions that might occur would be greatest in these areas. There are groundwater drinking water abstractions for which there are source protection areas in the vicinity of the proposed grid connection route: Castlewarren ZOC Group Water Scheme (GWS), Paulstown Public Water Scheme (PWS) and Clifden Cara PWS. Our Karst Viewer indicates there are karst landforms close to the proposed grid connection route.	
Health Service Executive	Scoping response provided was organised under the following headers: › Public Consultation › Decommissioning › Siting, Location & details of Turbines/Energy Storage Batteries › Assessment of Consideration of Alternatives › Noise and Vibration › Shadow Flicker › Air Quality › Surface and Ground Water Quality › Geotechnical and Peat Stability Assessment › Ancillary Facilities › Cumulative Impacts Full descriptions of points raised by Health Service Executive can be found in Appendix 2-1 Scoping Responses.	Chapter 1 Introduction Chapter 2 Background Chapter 3 Reasonable Alternatives Chapter 4 Description Chapter 5 Population and Human Health Chapter 8 Land, Soils and Geology Chapter 9 Water Chapter 10 Air Quality Chapter 12 Noise and Vibration Appendix 2-2 Community Engagement Report Appendix 4-3 Construction and Environmental Management Plan

		Appendix 4-8 Decommissioning Plan
Inland Fisheries Ireland	› Article 5 of the Surface Water Regulations (SI 272 of 2009) states that there should be no deterioration in Ecological Status. Article 28(2) of the Regulations states that a surface water body whose status is determined to be less than Good shall be restored to at least Good status. The proposed surveys/reports must demonstrate how this project would cause no deterioration to the above surface water bodies and is consistent with their restoration to good ecological status. › Excavations associated with the construction of turbine bases have the potential to mobilise significant quantities of suspended solids and associated nutrients to downstream surface waters. IFI recommends a buffer zone of 50m be provided from turbine bases to any wetted channels. › The following assessments should be provided: 1. *Baseline ecological assessments of water courses potentially affected by the proposed development, including fish species as well as other biological and physico-chemical surveys* 2. *Maps of all aquatic habitats potentially affected by the project: all drainage channels (temporary and permanent) should be mapped and where these channels transect the proposed road network.* 3. *An assessment of the potential adverse effects of the proposed works on all relevant aquatic receptors, including fish. Assessments should cover the site of the proposed wind development and the proposed grid connection route.* 4. *An assessment of the cumulative effects of the proposed development along with other existing or approved projects* 5. *An assessment of the impact on the conservation objectives of species listed as qualifying interests in the Barrow – Nore SAC, which includes Lamprey species and Atlantic Salmon.* › During the construction and operational phases, the applicant should adhere to the recommendations and guidelines outlined in IFI's Guidelines on Protection of Fisheries during Construction Works in and adjacent to Waters (2016). › The number of water crossings, whether on-site or for the proposed grid connection route, should be minimised, and existing crossings utilised where possible. Where existing crossings must undergo	Chapter 6 Biodiversity Chapter 8 Land, Soils and Geology Chapter 9 Hydrology and Hydrogeology Appendix 4-4 Construction and Environmental Management Plan Appendix 4-5 Surface Water Management Plan

	alteration, IFI request that these crossings are upgraded in the interests of habitat improvement and biodiversity net gain. Crossings should be designed to meet IFI's Fisheries Construction Guidelines referred to above. IFI should be consulted at the design phase to maximise favourable outcomes for fisheries habitats. › Instream works may only take place during the period 1 July to 30 September. There should be no interference with the bed, gradient, profile or alignment of watercourses without prior notification and the agreement of Inland Fisheries Ireland. Natural flow paths should not be interrupted or diverted in a manner that would increase the risk of erosion. › Proposed instream works must be accompanied by a site-specific method statement provided to IFI. The applicant should provide a commitment to provide these at least ten working days before works commence. Written approval from IFI should be obtained before works proceed. › SuDS principles should be incorporated into surface water management plans to attenuate any run-off of suspended solids or other deleterious matter. Routes of roads and tracks and the location of turning areas should be planned to minimise environmental disturbance. › Drainage associated with road construction should be designed to divert water away from buffer zones. Drainage infrastructure should be installed during dry ground conditions. The use of heavy plant and machinery on site should not result in soil erosion or nutrient losses. Mitigation measures for suspended solids must comply with an upper limit of 25mg per litre for Total Suspended Solids (TSS) as specified in the Salmonid Waters Regulations, SI 293 of 1988. › The use of borrow pits as a source of aggregate/ hardstanding material should have regard for the sensitivity of the soils/subsoils to erosion and the potential for the generation of suspended solids pollution from excavations linked to a borrow pit. IFI request that the applicant investigates the importation of material to site rather than the commencement of an on-site quarrying. › At all times the precautionary principle should be applied throughout the development. Particular attention should be paid to the various environmental directives including the Water Framework Directive, the Habitat and Birds Directives, the Fisheries Acts and the Local Government (Water Pollution) Acts. Other environmental legislation should be considered as appropriate. › In addition to environmental assessments (EIAR, NIS etc.), the application for planning should include a Construction Environmental Management Plan (CEMP), a Surface Water Management Plan (SWMP), and an Emergency Response Plan (EMP) in case of an emergency incident. Provision should be made for the appointment of a suitably qualified Project Environmental Manager and Ecological Clerk of Works.	

	› Records should be kept of biological and chemical monitoring of undertaken before and during the construction phase and after the works, and during the operational phase for the wind development. Records should also be kept of inspections of proposed surface water mitigation measures. These records should be made available upon request to any authorised person as defined under the Local Government (Water Pollution) Acts.	
Irish Aviation Authority	› Inform the aerodrome operator of erecting a manmade object at least 30 days in advance if the structure will be erected in the vicinity of the aerodrome. › Any person who intends on erecting a manmade object in excess of 45 metres above ground or surface water level must also notify the IAA and of intended crane erection at least 30 days in advance. The state requires a electronic terrain and obstacle data (eTOD). › The following items must be provided to IAA once construction is planned/ commenced: 1. WGS84 Coordinates for each turbine 2. Height above ground level 3. Verify if its standalone/merged WF 4. Horizontal extent (RD) of turbines and blade length › Lighting arrangement of WF concluded an aviation safety assessment may be required. › Based on the information provided, the proposed wind farm is 20 km NE to the licensed Aerodrome – Kilkenny Aerodrome, Holdensrath, Co Kilkenny. Please engage directly with the aerodrome licensee, Irish Skydiving Club Ltd to make them aware of the Seskin Wind Farm proposal. › Based on the licensee's observations, it may be necessary to undertake an aeronautical safety assessment to consider the potential impact of the wind farm on the safety of aircraft operations at Kilkenny Airfield.	Chapter 15 Material Assets
Irish Water	› Where the development proposal has the potential to impact an Uisce Éireann Drinking Water Source(s), the applicant shall provide details of measures to be taken to ensure that there will be no negative impact to Uisce Éireanns Drinking Water Source(s) during the construction and operational phases of the development. Hydrological / hydrogeological pathways between the applicant's site and receiving waters should be identified as part of the report. › Where the development proposes the backfilling of materials, the applicant is required to include a waste sampling strategy to ensure the material is inert.	Chapter 9 Water Appendix 4-4 Construction and Environmental Management Plan Appendix 4-5 Surface Water Management Plan

	› Mitigations should be proposed for any potential negative impacts on any water source(s) which may be in proximity and included in the environmental management plan and incident response. › Any and all potential impacts on the nearby reservoir as public water supply water source(s) are assessed, including any impact on hydrogeology and any groundwater/ surface water interactions. › Impacts of the development on the capacity of water services (i.e. do existing water services have the capacity to cater for the new development). This is confirmed by Uisce Éireann in the form of a Confirmation of Feasibility (COF). If a development requires a connection to either a public water supply or sewage collection system, the developer is advised to submit a PreConnection Enquiry (PCE) enquiry to Uisce Éireann to determine the feasibility of connection to the Uisce Éireann network. › The applicant shall identify any upgrading of water services infrastructure that would be required to accommodate the proposed development. › In relation to a development that would discharge trade effluent – any upstream treatment or attenuation of discharges required prior to discharging to an Uisce Éireann collection network. › In relation to the management of surface water; the potential impact of surface water discharges to combined sewer networks and potential measures to minimise and or / stop surface waters from combined sewers. › Any physical impact on Uisce Éireann assets – reservoir, drinking water source, treatment works, pipes, pumping stations, discharges outfalls etc. including any relocation of assets. › When considering a development proposal, the applicant is advised to determine the location of public water services assets, possible connection points from the applicant's site / lands to the public network and any drinking water abstraction catchments to ensure these are included and fully assessed in any pre-planning proposals. › Other indicators or methodologies for identifying infrastructure located within the applicant's lands are the presence of registered wayleave agreements, visible manholes, vent stacks, valve chambers, marker posts etc. within the proposed site. › Any potential impacts on the assimilative capacity of receiving waters in relation to Uisce Éireann discharge outfalls including changes in dispersion / circulation characterises. Hydrological / hydrogeological pathways between the applicant's site and receiving waters should be identified within the report. › Any potential impact on the contributing catchment of water sources either in terms of water abstraction for the development (and resultant potential impact on the capacity of the source) or the	

	potential of the development to influence / present a risk to the quality of the water abstracted by Uisce Éireann for public supply should be identified within the report. › Where a development proposes to connect to an Uisce Éireann network and that network either abstracts water from or discharges wastewater to a "protected"/ sensitive area, consideration as to whether the integrity of the site / conservation objectives of the site would be compromised should be identified within the report. › Mitigation measures in relation to any of the above ensuring a zero risk to any Uisce Éireann drinking water sources (Surface and Ground water).	
Kilkenny County Council	**Health and Safety Authority** › The Health and Safety Authority (the Authority), acting as the Central Competent Authority under the Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. 209 of 2015) gives technical advice to the Planning Authority when requested, under regulation 24(2) in relation to: a) the siting and development of new establishments; b) modifications to establishments of the type described in Regulation 12(1); c) new developments including transport routes, locations of public use and residential areas in the vicinity of establishments, where the siting, modifications or developments may be the source of, or increase the risk or consequences of, a major accident. › Since the above-referenced application appears to be outside the scope of the Regulations, the Authority has no observations to forward. **Gas Networks Ireland** › While there is no gas network in the immediate vicinity of the proposed Seskin Wind Farm, please be aware of high-pressure transmission mains to the east of the site and to the south of Kilkenny. See attached drawings for further information. The proposed electrical cable to the substation in Kilkenny may impact on these. If so, Gas Networks Ireland would need to be consulted and all works would need to follow the attached Code of Operations. › Please also note the following in relation to working near gas pipelines: ○ The Gas Transmission Pipeline in the general area of interest to you is shown, in RED, on the drawing attached. Please treat all Gas Networks Ireland Drawings as 'indicative' only.	Chapter 5 Population and Human Health Chapter 15 Material Assets Appendix 4-4 Construction and Environmental Management Plan

	○ The Gas Distribution Network in the vicinity is shown, in GREEN and/or in BLUE on the drawing attached. Please refer to the attached Safety Advice Booklet for guidance on working in the vicinity of this infrastructure. ○ To verify the in-situ position of the Gas Transmission Pipeline please contact Chris Dillon, chris.dillon@gasnetworks.ie. All work in the vicinity of a Gas Transmission. Pipeline must be completed in compliance with the attached 'Code of Practice 2021'. ○ The Gas Transmission Pipelines exist within Gas Networks Ireland Wayleaves. No excavation may take place within any such Wayleave unless consent, in the form of a valid Excavation Permit, has been granted by Gas Networks Ireland. Chris Dillon will issue this permit once all conditions for excavations have been met. ○ The Strategic Gas Distribution Main in this vicinity is highlighted in BLUE on therelevant GNI Drawing as attached. This must be treated as a Gas TransmissionPipeline and contact must be made with GNI prior to any excavation in the vicinity ofsame. All work in the vicinity of such must be completed in compliance with theattached 'Code of Practice 2021'.	
Kilkenny County Council – Roads Department	Scoping response provided was organised under the following headers: › Wind farm site › Grid connection matters › General observation on cable grid connection routes › Other considerations which are likely to form some of the conditions if granted Full descriptions of points raised by Kilkenny County Council – Roads Department can be found in Appendix 2-1 Scoping Responses.	Chapter 4 Description Chapter 15 Material Assets Appendix 15-2 Traffic Management Plan
Kilkenny County Council - Planning Department	› Having regard to the prominent location of the proposed development site close to an upland scenic area and Protected Views V13 and its location in close proximity of Natura 2000 sites, the Dinin River and built heritage and national monuments/archaeology along the grid connection route, the proposed wind farm development and its grid connection will require a thorough assessment of potential impacts on these sensitive receptors to include the cumulative impacts with other wind farm proposals in the surrounding area, in particular current Strategic Infrastructure Development (SID) application lodged with An Bord Pleanala, reference 315365-22, for 7 no. wind turbines and	Chapter 2 Background Chapter 14 Landscape and Visual Planning Policy Rationale Report

	associated infrastructure and grid connection in County Kilkenny and County Carlow, close to your proposed site at Seskin. › The applicant is advised to fully comply with the requirements of Directive 2014/52/EU on the effects of certain public and private projects on the Environment (EIA Directive) and any resulting amendments to the Planning and Development Act 2000 as amended and the Planning and Development Regulations 2001, as amended. The applicants should also comply with the requirements of the '*Guidelines for Planning Authorities and An Bord Pleanala on carrying out Environmental Impact Assessment*' and any updates subsequent to the above Directive. › In relation to the Kilkenny City and County Development Plan, on 15th October 2021, the Minister of State at the Department of the Housing, Local Government and Heritage, consequent to a recommendation made to him by the Office of the Planning Regulator under section 31AM(8) of the Planning and Development Act 2000 (as amended), notified Kilkenny County Council of his intention to issue a Direction to the Kilkenny City and County Development Plan 2021-2027. › In accordance with Section 31(4) of the Planning and Development Act 2000, those parts of the Kilkenny City and County Development Plan 2021 – 2027 Plan referred to in the notice shall be taken to have not come into effect, been made or amended; namely; Chapter 11 Renewable Energy: ○ Section 11.4 Kilkenny Targets ○ Section 11.5.1 Current status and targets ○ Figure 11.4 Wind Strategy areas.	
Kilkenny County Council – Environment Department	Scoping response provided was organised under the following subject areas: › Storm/surface water management › Waste management › Tank and drum storage › Noise, air and shadow flicker › Wastewater storage › Construction and decommissioning site works plan › Vehicle Inspection & Maintenance Plan › Community Liaison Officer › Construction and environmental management plan	Chapter 5 Population and Human Health Chapter 9 Water Chapter 10 Air Chapter 11 Noise Appendix 4-3 Construction and Environmental Management Plan Appendix 4-4 Surface Water Management Plan

	Full descriptions of points raised by Kilkenny County Council – Environment Department can be found in Appendix 2-1 Scoping Responses.	
Transport Infrastructure Ireland	› Consultations should be had with relevant local authority/ national roads design office. › Concerned with the potential significant impacts the development would have on any national roads in close proximity. › Assess visual impacts from existing national roads. › Have regard for any EIAR/ EIS and all conditions and/ or modifications imposed by ABP regarding road schemes in the area. › Consider TII publications and Environmental Assessment and Construction Guidelines (Guidelines for the Treatment of Air Quality During the Planning and Construction of National Road Schemes (National Roads Authority, 2006)) › Consider Environmental Noise Regulations 2006 (SI 140 of 2006), in particular, how the development will affect future action plans by the relevant competent authority, and the incorporation of noise barriers to reduce noise impacts (see Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1st Rev., National Roads Authority, 2004)). › and especially regarding noise, air quality, etc. › A Traffic & Transport Assessment (TAA) should be conducted with reference to Traffic and Transport Assessment Guidelines (2014). › Consult TII publications to determine if a Road Safety Audit (RSA) is required. › Clearly identify haul routes proposed and fully assess the network to be traversed as some roads may not have the capacity to accommodate any abnormal weight loads and any temporary works required should be identified also. › The applicant/developer should also consult with all PPP Companies, MMaRC Contractors and road authorities over which the haul route traverses to ascertain any operational requirements, including delivery timetabling, etc. to ensure that the strategic function of the national road network is safeguarded. › Any grid connection and cable routing proposals should be developed to safeguard proposed road schemes as TII will not be responsible for costs associated with future relocation of cable routing where proposals are catered for in an area of a proposed national road scheme. In that regard, consideration should be given to routing options, use of existing crossings, depth of cable laying, etc.	Chapter 12 Noise and Vibration Chapter 14 Landscape and Visual Chapter 15 Material Assets Appendix 15-2 Traffic Management Plan

2.8 Other Consultations

2.8.1 Community Engagement

The Applicant has engaged with the wider communities with regards to the Proposed Project. Public consultation began in March 2022, through engagement with near neighbours, local representatives, and local community groups. This included door-to-door engagement with near neighbours within 2 km of the Proposed Wind Farm turbines, and a project website was launched. Two dedicated Community Liaison Officers were also appointed to the Seskin Wind Farm project. In August 2023, a Public Information Event was held in the Lord Bagenal Inn in Leighlinbridge. An online virtual consultation room was also created, including an introduction video, information boards, and 360 degree view photomontages. There was also a feedback form and a call back request button. The objective of the consultations was to ensure that the views and concerns of all were considered as part of the Proposed Project design and Environmental Impact Assessment (EIA) process. Appendix 2-2 of this EIAR contains a full and detailed community engagement report. The report was prepared to record the consultation carried out with the local community in respect of the Proposed Project.

The Proposed Project has the potential to have significant benefits for the local economy, by means of job creation, landowner payments and commercial rate payments. An important part of any renewable energy development, which EDF Renewables Ireland Ltd. has been at the forefront of developing, is its Community Benefit Package. The concept of directing benefits from wind farms to the local community is promoted by the National Economic and Social Council (NESC) and the Wind Energy Ireland (WEI) among others. While it may be simpler and easier to put a total fund aside for a wider community area, the applicant is endeavouring to develop new ways to direct increased gain towards the local community with particular focus on those living closest to the Proposed Project.

The Wind Energy Development Guidelines (2006) (the DoEHLG 2006 Guidelines) state that:

> *"While it is not a mandatory requirement, it is strongly recommended that developers of a wind energy project should engage in active consultation and dialogue with the local community at an early stage in the planning process, ideally prior to submitting a planning application".*

This was further addressed in the Preferred Draft Approach to Wind Energy Development in Ireland (June 2017) which stated the following with respect to planning applications for wind farms:

> *"Planning applications must contain a Community Report prepared by the applicant which will specify how the final proposal reflects community consultation. The Community Report must also outline steps taken to ensure that the proposed development will be of enduring economic benefit to the communities concerned".*

The Draft Revised Wind Energy Guidelines (Department of Housing, Planning and Local Government, 2019) (the Draft 2019 Guidelines) has retained this position stating the following:

> *"In order to promote the observance of best practice, planning authorities should require applicants to prepare and submit a Community Report with their planning application and a condition on any subsequent planning permission should require developers to carry out the development in accordance with the approved Community Report".*

This report outlines the consultation and community engagement initiatives undertaken by the applicant prior to the submission of the planning application. It also outlines the main issues identified during this process, how the final proposal reflects community consultation and the steps taken to ensure that the Proposed Project will be of enduring economic benefit to the communities concerned.

The Proposed Project will provide an enduring economic benefit to the communities surrounding the Proposed Project as outlined in Section 4.6 of the EIAR, through the community benefit package for residents and community groups, employment during the construction and operation of the Proposed Project and through the annual rates payable to the local authority.

2.8.2 Pre-Planning Consultation

2.8.2.1 Carlow County Council

The prospective applicant and members of the design team met with Carlow County Council in relation to the Proposed Project prior to the submission of this planning application. The pre-planning meeting took place on 22th August 2023 via Microsoft Teams and included representatives from Carlow County Council, EDF and MKO. The team gave a PowerPoint presentation as an introduction to the site and development proposals.

Those in attendance were as follows:

- Susan Mahon – Carlow County Council
- Pauline Hayes - Carlow County Council
- Jerry Crowley – Carlow County Council
- John Conaghan – EDF
- Aoife Sedgwick - EDF
- Ronan Dunne – MKO
- John Willoughby – MKO
- Ellen Costello – MKO
- Catherine Johnson – MKO
- Jack Smith – MKO

Matters discussed included:

- Site selection and location
- Policy context
- Traffic
- Public consultation – overview of consultations to date and potential benefits to the area
- Landscape assessment – designations and scenic views
- Biodiversity
- Cumulative Assessment

2.8.2.2 Carlow County Council – Design Flexibility Consultation Meeting

The prospective applicant and members of the design team met with Carlow County Council in relation to the inclusion of unconfirmed details in the planning application for the Proposed Project. This meeting was held under the provisions of section 32H of the Act. The design flexibility meeting took place on the 19th February 2024 via Microsoft Teams and included representatives from Carlow County Council, EDF and MKO. The discussion centred around the elements of the Proposed Project that cannot be confirmed prior to the lodgement of the planning application (i.e the turbine dimensions) and who these elements will be adequately assessed in the EIAR.

Those in attendance were as follows:

- Susan Mahon – Carlow County Council
- Wesley Keogh - Carlow County Council
- Donnacha Lynch – Carlow County Council

- John Conaghan – EDF
- Aoife Sedgwick – EDF
- Cheryl O'Connor – EDF
- John Willoughby – MKO
- Brandon Taylor – MKO
- Ellen Costello – MKO
- Catherine Johnson – MKO

Matters discussed included:

- The design flexibility process as set out by the legislation
- The turbine dimension parameters and the rationale for their inclusion in the planning application
- The assessment of the turbine parameters and its presentation in each chapter of the EIAR

Carlow County Council issued their flexibility opinion on the 14th March 2024. The flexibility opinion confirms that the turbine tip height, rotor diameter and hub height may be confirmed after the proposed application has been made and decided. The flexibility opinion as issued by Carlow County Council on the 14th March 2024 is enclosed with the cover letter that accompanies this application.

2.8.2.3 Kilkenny County Council

A pre-planning meeting with Kilkenny County Council was held and included representatives from EDF, MKO and Kilkenny County Council on the 13th of September 2023 via Microsoft Teams.

Those in attendance were as follows:

- Claire Kelly – Kilkenny County Council
- Owen Shine – Kilkenny County Council
- Francis Brophy – Kilkenny County Council
- John Conaghan – EDF
- Aoife Sedgwick – EDF
- Ronan Dunne – MKO
- John Willoughby – MKO
- Catherine Johnson – MKO
- Brandon Taylor – MKO

Matters discussed included:

- Site Selection and location
- Policy Context
- Roads
- Ecology
- Planning Application and Submission

2.9 Cumulative Impact Assessment

The EIA Directive and associated guidance documents state that as well as considering any direct, indirect, secondary, transboundary, short-, medium-, and long-term, permanent, and temporary, positive and negative effects of a proposed development or project (all of which are considered in the various chapters of this EIAR), the description of likely significant effects should include an assessment of cumulative impacts that may arise. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to a proposed development or project. The factors to be considered in relation to cumulative effects include population and human health, biodiversity, land, soil, water, air, climate, material assets, landscape, and cultural heritage as well as the interactions between these factors.

To gather a comprehensive view of cumulative impacts on these environmental considerations and to inform the EIA process being undertaken by the consenting authority, each relevant chapter within this EIAR includes a cumulative impact assessment where appropriate.

The potential for cumulative impacts arising from other projects has therefore been fully considered within this EIAR.

2.9.1 Methodology for the Cumulative Assessment of Projects

The EIA Directive includes a requirement to consider '*a 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 methodology for the cumulative assessment has been informed by the relevant Guidance documents and by the nature and scale of the Proposed Project.

The potential cumulative impact of the Proposed Project and combined with the potential impact of other projects or plans has been carried out with the purpose of identifying what influence the Proposed Project will have on the surrounding environment when considered collectively with approved and existing projects, projects pending a decision from the planning authority, projects in the public domain such as those Strategic Infrastructure Development (SID) at pre-consultation with An Bord Pleanála, and land-uses in the vicinity of the Proposed Project location.

The cumulative impact assessment of projects has three principle aims:

- To establish the range and nature of existing and approved projects within the cumulative impact study area of the Proposed Project.
- To summarise the relevant projects which have a potential to create cumulative impacts.
- To identify the projects that hold the potential for cumulative interaction within the context of the Proposed Project and discard projects that will neither directly or indirectly contribute to cumulative impacts.

Assessment material for this cumulative impact assessment was compiled on the relevant developments within the vicinity of the Proposed Project. The material was gathered through a search of relevant online Planning Registers, reviews of relevant EIAR (or historical EIS) documents, planning application details and planning drawings, and served to identify past and future projects, their activities and their environmental impacts.

2.9.2 Cumulative Study Area

The geographical boundaries of the various zones of sensitivity of and to the Proposed Project from which there may be potential for cumulative impacts to arise relative to each individual EIAR topic, i.e each chapter, is presented below in Table 2-9. Following consultation with the EIAR team on each individual topic, the maximum geographical extent and justification for this extent was established and is presented below.

Table 2-9 Cumulative Study Areas and Justification

Individual Topic	Maximum Extent	Justification
Population & Human Health (including shadow flicker)	**Proposed Wind Farm:** Proposed Wind Farm Study Area for Population (District Electoral Divisions) Shadow Flicker Study Area (10xRD buffer from proposed turbines) **Proposed Grid Connection Route:** Proposed Grid Connection Route Study Area for Population (100m from underground electrical cabling route) Consideration for the Population & Human Health cumulative extent is also given to the Air Quality, Climate, Noise and Landscape & Visual (i.e Residential Visual Amenity) Cumulative Study areas	For the assessment of cumulative shadow flicker, any other existing, permitted or proposed wind farms are considered where their ten times rotor diameter shadow flicker study area are located within the Shadow Flicker Study Area of 1.55km (ten times the rotor diameter from proposed turbines) for the Proposed Project. As the nearest proposed, permitted or existing wind farms is 1.2km from the proposed turbines, there is potential for cumulative shadow flicker effects. The Study Area for Population is identified in Section 5.3.1 in Chapter 5 as the District Electoral Divisions where the Proposed Wind Farm is located. For the Proposed Grid Connection Route, the Study Area for Population is identified as 100m from the Proposed Grid Connection Route. Both Study Areas for Population identified are considered for cumulative effects on Population.
Biodiversity (including Bats)	10 km from the Proposed Wind Farm 200 m from Proposed Grid Connection Route. Consideration for the Biodiversity cumulative extent is also given to the Birds and Water Cumulative geographical boundaries.	Using the precautionary approach and given the nature and scale of the Proposed Project, the geographical boundary for terrestrial ecological aspects, i.e. habitats, is 10 km for cumulative assessment for the Proposed Wind Farm and 200 m from the Proposed Grid Connection Route.
Birds	25km buffer from Proposed Wind Farm turbines for large infrastructural developments such as wind farms, energy and public transport developments.	NatureScot guidance '*Assessing the Cumulative Impacts of onshore Wind Energy Developments*' (SNH, 2012; 2018) was consulted while undertaking the cumulative assessment. SNH (2012; 2018) emphasises that its priority is to '*maintain the conservation status of the species population at the national*

		level.' However, it is acknowledged that consideration should also be allowed for impacts at the regional level '*where regional impacts have national implications (for example where a specific region holds the majority of the national population)*'. Following the guidance of SNH (2012), the cumulative impact assessment has been carried out at the scale of the importance rating of the receptor. A 25km radius of the Proposed Wind Farm turbines was considered a reasonable approximation of the size of a county and a 25km radius of the Proposed Wind Farm turbines was considered a reasonable approximation for the local level.
Land, Soils and Geology	EIAR Site Boundary	As there is no pathway for offsite cumulative impacts for Land, Soils and Geology, the cumulative study area is the EIAR Site Boundary
Water	Proposed Wind Farm: Nore Catchment for large infrastructural developments such as wind farms, energy and public transport developments. River Sub Basins for all smaller proposed, permitted or existing plans or projects (i.e. private and commercial type developments). Proposed Grid Connection Route: Within a 200m buffer zone of the Proposed Grid Connection Route.	Regional surface water catchments are used for cumulative impact assessment with regard large infrastructural developments such as wind farms, energy and public transport developments. The potential for cumulative effects for these developments likely exists on a regional catchment scale (i.e. significant works likely existing in several sub-basins). Therefore, other wind-farm developments are considered within the Shannon Catchment for cumulative effects. River Sub Basins are used for smaller developments (i.e. private & commercial type developments). These developments are not likely to present a significant cumulative impact risk on a regional catchment scale as any effects would likely be imperceptible as a result of the setback distances and localised nature of the associated works. Given the nature and scale of the proposed works and the lack of hydrological cumulative impact potential beyond the river sub basin scale, the Water cumulative study area is defined by river sub basins in which the Proposed Wind Farm is located. Due to the narrow nature of the Proposed Grid Connection Route trench (~0.6m wide), a 200m buffer zone is an appropriate scale when considering potential cumulative effects on the water environment.

Air Quality	Air Quality Study Area is 1km from Proposed Wind Farm. 500m from Proposed Grid Connection Route.	Given dust particles do not generally travel greater than 500m from source (*Guidance on the Assessment of Mineral Dust Impacts for Planning*, IAQM 2016) the geographical boundary for the cumulative dust impact is 500m. In line with the TII Publication Air Quality Assessment of Proposed National Roads – Standard PE-ENV-01107, December 2022, a geographical boundary of 1km was used for cumulative air quality assessment.
Climate	The Climate assessment has been considered on a national basis and not confined to a specific study area.	The Climate assessment has considered the cumulative effects of the Proposed Project with other developments on a national basis under the relevant national Sectoral Emissions Ceilings.
Noise & Vibration	The list of wind farms which were initially considered in cumulative assessment extended to 25 km from Proposed Wind Farm turbines 200m from Proposed Grid Connection Route.	The geographical boundary for the cumulative noise assessment is the area within which noise levels from the proposed, consented and existing wind turbine(s) may exceed 35 dB LA90 at up to 10 m/s wind speed (Institute of Acoustics document *Good Practice Guide To The Application Of Etsu-R-97 For The Assessment And Rating Of Wind Turbine Noise*). As the nearest proposed, permitted or existing wind farm is 1.2km from the Proposed Wind Farm turbines, there is potential for cumulative noise effects. Due to the narrow nature of the Proposed Grid Connection Route trench (~0.6m wide), a 200m buffer zone is an appropriate scale when considering potential cumulative noise effects.
Cultural Heritage	20km buffer from Proposed Wind Farm turbines 200m from Proposed Grid Connection Route.	Cumulative impacts on setting are more likely to occur at the operational stage of the development (i.e. post-construction). In this regard in order to assess overall cumulative effects on archaeology and cultural heritage the Proposed Project is considered in the context of other developments, in particular other permitted and proposed wind farms within 25km of the Proposed Wind Farm turbines.

		Direct effects for the Proposed Project are considered to be confined to within the EIAR Site Boundary and relate to construction effects. Due to the narrow nature of the Proposed Grid Connection Route trench (~0.6m wide), a 200m buffer zone is an appropriate scale when considering potential cumulative noise effects.
Landscape & Visual	20km from Proposed Wind Farm turbines for visual and landscape effects. 15km from Proposed Wind Farm turbines for effects on landscape character.	The Wind Energy Development Guidelines (DoEHLG, 2006) ('the Guidelines') require that "in areas where landscapes of national or international renown are located within 25 km of a proposed wind energy development, the Zone of Theoretical Visibility should be extended as far (and in the direction of) that landscape". There are no landscapes of national or international renown within 25km of the Proposed Wind Farm, and therefore the cumulative boundary for visual and landscape effects is reduced to 20km from the Proposed Wind Farm turbines. The LVIA study area has been chosen as 15 kilometres for effects on landscape character. Through experience conducting LVIA for other wind energy development projects, the assessment team determined that no significant effects on landscape character are likely to arise beyond distances of 15km from the Proposed Wind Farm turbines. Therefore, a LVIA Study Area of 15km is deemed appropriate for effects on landscape character in relation to the assessment of effects upon designated Landscape Character Areas. The LVIA study area has been chosen as 20 kilometres for effects on landscape character, following the guidance on Appendix 3 of the WEDGs which provides that '*For blade tips in excess of 100m, a Zone of Theoretical Visibility radius of 20km would be adequate*' (WEDGs Page 94, DoEHLG, 2006; Page 152, DoHPLG, 2019).

		Through experience conducting LVIA for other wind energy development projects, the assessment team determined that no significant effects on landscape character are likely to arise beyond distances of 15km from the Proposed Wind Farm turbines. Therefore, a LVIA Study Area of 15km is deemed appropriate for effects on landscape character in relation to the assessment of effects upon designated Landscape Character Areas.
Material Assets: Traffic & Transport	25km buffer from Proposed Wind Farm turbines for large infrastructural developments such as wind farms, energy and public transport developments. Following that, the proposed transport route for each project is considered. 200m from Proposed Grid Connection Route.	Informed by traffic modelling scenario and the area of influence the Proposed Project has on changing traffic volumes. The potential cumulative traffic effects with the Proposed Project are assessed on the following criteria; › Project status (proposed to operational) › Degree of overlap with the Proposed Project delivery highway network (low to high) › Traffic volumes (low to high) The geographical boundary for the traffic & transport cumulative assessment is defined by the potential for other projects to overlap with the Proposed Project delivery highway network, and so a 25km buffer from turbines and 200m buffer from the Proposed Grid Connection Route is deemed appropriate to capture other plans and projects with the potential for cumulative effects with the Proposed Project. Please refer to Chapter 14 Material Assets for further details on the cumulative assessment methodology.
Material Assets: Telecoms & Aviation	The list of wind farms and other projects which were initially considered in cumulative assessment extended to 25 km from Proposed Wind Farm turbines. 200m from Proposed Grid Connection Route.	The geographical boundary for the telecoms cumulative assessment is defined by the potential for other wind farm projects to interfere with broadcast signals that interact with the Proposed Project. As the nearest proposed, permitted or existing wind farms is 1.2km from the Proposed Wind Farm turbines, there potential for cumulative effects.

To gather a comprehensive view of cumulative impacts within the cumulative study area and to inform the EIA process being undertaken by the consenting authority, each relevant chapter within the EIAR addresses the potential for cumulative effects where appropriate and within the context of their identified cumulative study area. A long list of projects considered (i.e. the largest cumulative study boundary of 25km from Proposed Wind Farm turbines, and Hydrological Catchment list) across all disciplines in their cumulative impact assessment is included in Appendix 2-3. Smaller cumulative assessment studies have considered all projects within their specific boundary which fall within the long list in Appendix 2-3.

2.9.2.2 Other Developments/Land uses

The review of the relevant County Council planning registers documented relevant general development planning applications in the vicinity of the Proposed Project site, the majority of which relate to the provision and/or alteration of one-off rural housing and the provision of agricultural buildings. These applications and land uses have also been taken account in describing the baseline environment and in the relevant assessments.

Furthermore, the cumulative impact assessments carried out in each of the subsequent chapters of this EIAR consider all potential significant cumulative effects arising from all land uses in the vicinity of the Proposed Project. These include permitted and existing wind farms in the area, ongoing agricultural practices/forestry practices, quarries and extractive industries, intensive production/ processing industries, large infrastructure projects and other EIAR projects. The OPW (www.floodinfo.ie) does not record the presence of any Arterial Drainage Schemes or Benefited Lands within the Proposed Wind Farm or along the Proposed Grid Connection Route.

Overall, the Proposed Project has been designed to avoid and mitigate impacts on the environment and a suite of mitigation measures is set out within the EIAR. The mitigation measures set out in this EIAR will ensure that significant cumulative effects do not arise during the construction, operational or decommissioning phases of the Proposed Project. Additional detail in relation to the potential significant cumulative effects arising and, where appropriate, the specific suite of relevant mitigation measures proposed are set out within each of the relevant chapters of this EIAR.

2.9.2.3 Forestry Felling and Replanting

The Proposed Wind Farm comprises coniferous forestry and agricultural land. This land-use will continue in conjunction with the operation and decommissioning of the Proposed Project. The potential for cumulative effects during the construction, operational and decommissioning phases of the Proposed Project have therefore been assessed.

Forestry Felling associated with Proposed Development

The Forest Service is responsible for ensuring the development of Forestry within Ireland occurs in a manner and to a scale that maximises its contribution to national socio-economic well-being on a sustainable basis that is compatible with the protection of the environment. The forestry felling associated with the Proposed Project will be carried out under the relevant guidance and under licence from the Forest Service and full details are set out in Section 4.4.8 of the EIAR. In line with the Forest Service's published policy on granting felling licences for wind farm developments, areas cleared of forestry for turbine bases, access roads, and any other wind farm-related uses will have to be replaced by replanting at an alternative site or sites. The Forest Service policy requires replacement or replanting on a hectare for hectare basis for the footprint of the turbines and the other infrastructure.

Replacement of Forestry

The replacement of forestry, felled as part of the Proposed Project, may occur on any lands, within the state, benefitting from Forest Service Technical Approval[1] for afforestation, should the Proposed Project receive planning permission. Under the Forestry Regulations 2017, all applications for licences for afforestation require the prior written approval (technical approval) of the Minister for Agriculture, Food and the Marine.

The requirements for afforestation licencing are set out in the Forestry Regulations 2017 – this includes consideration of Environmental Impact Assessment and Appropriate Assessment as set out in parts 7 and 8 of the Regulations, respectively. Further detail is set out in the Environmental Requirements for Afforestation (DAFM, 2016)[10]. This ensures that afforestation takes place in a way that complies with environmental legislation and enhances the contribution new woodlands and forests can make to the environment and to the provision of ecosystem services, such as water protection and landscape enhancement.

The typical environmental effects of afforestation include potential effects on biodiversity, soils and geology, hydrology and hydrogeology, cultural heritage, landscape and visual, and air and climate.

The applicant is seeking a ten-year planning permission which incorporates time to secure a grid connection agreement, a route to market (RESS or equivalent Power Purchase Agreement), select the preferred equipment suppliers and put the necessary capital funding in place to allow construction and delivery to commence. Thus, the identification of forestry replacement lands at this stage is seen as premature. If a licence for afforestation was obtained prior to seeking and/or obtaining planning permission, it is highly likely that any licencing approvals sought from the Forest Service would have expired before it could be taken up due to the time required for the planning processes and post-planning delivery preparations. The Forest Service Afforestation Licences expire after 3 years from when they are consented.

Furthermore, as mentioned above, the key environmental issues relating to afforestation include water, biodiversity, archaeology, and landscape. Each is subject to regular updates in terms of best practice, guidelines, standards and national policies. Delaying the identification of alternative afforestation lands until such time as they are required enables identification of optimum lands available (from an environmental perspective) for afforestation at that time.

For the purposes of this project, the applicant commits that the location of any replanting (alternative afforestation) associated with the project will be outside the identified cumulative study areas. On this basis, it is reasonable to conclude that there will be no more than imperceptible in-combination cumulative effects associated with the replanting. Therefore, forestry replanting is not considered further in the impact assessment chapters of the EIAR.

In addition, the applicant commits to not commencing the project until both a felling and afforestation licence(s) is in place and, therefore, this ensures the afforested lands are identified, assessed and licenced appropriately by the relevant consenting authority.

Further details in relation to the consideration forestry replanting is included in Section 4.4.8.1.2 of the EIAR.

2.9.3 Summary

The cumulative impact assessments carried out in each of the subsequent chapters of this EIAR consider all potential significant cumulative effects arising from relevant projects, plans and land uses

[10] https://www.gov.ie/en/publication/642e6-forestry/#environmental-requirements

within the cumulative study area and within the vicinity of the Proposed Project. These include ongoing agricultural practices.

Overall, the Proposed Project has been designed to mitigate impacts on the environment and particularly water, and a suite of mitigation measures is set out within the EIAR. Additional detail in relation to the potential significant cumulative effects arising and, where appropriate, the specific suite of relevant mitigation measures proposed are set out within each of the relevant chapters of this EIAR.