Environmental Impact Assessment Report

Proposed Clonberne Wind Farm Development, Co. Galway

Chapter 2 – Background to the Proposed Project

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2. BACKGROUND TO THE PROPOSED PROJECT

This section of the Environmental Impact Assessment Report (EIAR) presents information on renewable energy and climate change policy and targets, the international, national, regional and local planning context for the Proposed Project, planning history, scoping and consultation, as well as setting out the nature of the cumulative impact assessment process undertaken.

2.1 Introduction

The Proposed Project comprises 11 No. wind turbines, and associated infrastructure in the townland of Clonberne, and adjacent townlands, in Co. Galway, and an on-site substation and associated works, including underground cabling to connect to the National Grid. The Proposed Project comprises a single grid connection option due to the site's proximity to the existing Cashla – Flagford 220kV overhead line.

For ease, and as set out in Chapter 1 of the EIAR:

- Where the 'Proposed Project' is referred to, this relates to all the project components described in detail in Chapter 4 of this EIAR i.e., Wind Farm and Grid Connection as detailed in Sections 1.4.1 and 1.4.2 of the EIAR.
- Where 'the Site' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-1 of the EIAR.
- Where the 'Proposed Wind Farm' is referred to, this refers to turbines and associated foundations and hard-standing areas, borrow pit, access roads, temporary construction compounds, turbine delivery accommodation works, peatland enhancement area, underground cabling, peat, spoil and overburden management, site drainage, tree felling and all ancillary works and apparatus. The planning application for the Proposed Wind Farm Site is made to An Bord Pleanála in accordance with the provisions of Section 37E of the Planning and Development Act 2000, as amended.
- Where 'Proposed Grid Connection' is referred to, this refers to the onsite substation, and associated underground 220kV cabling connecting into the existing Cashla – Flagford 220kV overhead line at Laughil, subject to a planning application under Section 182A of the Planning and Development Act, 2000, as amended.

This EIAR, along with a NIS, will assess the Proposed Project, the Proposed Wind Farm Site and the Proposed Grid Connection.

The planning application for the Proposed Wind Farm is being submitted directly to the Board as a Strategic Infrastructure Development (SID) in accordance with Section 37E of the Planning and Development Act, 2000 as amended. The Proposed Wind Farm has an estimated total generating capacity of 79.2MW and therefore it meets the threshold for wind energy set out in the Seventh Schedule of the Planning and Development Act 2000, as amended (being *'An installation for the harnessing of wind power for energy production (a wind farm) with more than 25 turbines or having a total output greater than 50 megawatts'*). This approach has been confirmed following consultations with the Board under the provisions of Section 37B of the Planning and Development Act 2000 as amended (Case Reference ABP-307058-20).

A concurrent planning application for the Proposed Grid Connection works will be submitted to An Bord Pleanála in accordance with Section 182A of the Planning and Development Act 2000, as amended as both the components and function of the Proposed Grid Connection fall within the scope

of Section 182A (1) of the Act, based upon the definition of electricity transmission as set out in Subsection 9 of Section 182A, i.e. *'a high voltage line where the voltage would be 110 kilovolts or more*' This approach has been confirmed following consultations with the Board under the provisions of Section 182E of the Act of the Planning and Development Act 2000 as amended (Case Reference ABP- 314729-22). The Proposed Grid Connection application which is being applied for under Section 182A will also include a Battery Energy Storage System (BESS). The BESS will connect to the grid at 110kV or greater and is therefore included in this application.

This EIAR and NIS will accompany the planning permission applications for the Wind Farm Site and Grid Connection which will be made to An Bord Pleanála in accordance with the provisions of Section 37A and Section 182A of the Planning and Development Act 2000, as amended. Both the EIAR and NIS contain the information necessary for An Bord Pleanála to complete the Appropriate Assessment and Environmental Impact Assessment as required for these planning permission applications.

For clarity in this EIAR, all elements of the Proposed Project, Proposed Wind Farm Site and the Proposed Grid Connection will be assessed cumulatively and in combination with other plans and projects to aid the competent authority in carrying out an EIA. Unless stated otherwise, chapters will be assumed to assess the Proposed Project which combines the respective elements of the Proposed Wind Farm Site and the Proposed Grid Connection. If stating otherwise, a chapter will assess the Proposed Wind Farm Site or the Proposed Grid Connection.

The Battery Energy Storage System (BESS)compound will have a footprint of 4,143m^{2}which will comprise 10no. Battery Storage modules and 10 no. transformers and 5 no. auxiliary transformers. Each battery storage module will measure 12.2m X 2.89m with a height of 2.58m.

The provision of wind turbines will generate renewable energy and provide it for use on 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 80% by 2030. The CAP places front and centre the facts that without urgent action, global heating is likely to reach 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 also 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 Proposed Project represents the provision of additional wind energy generation and will contribute towards Ireland satisfying its 2030 and 2050 renewable energy targets.

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 happens. 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 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.

"*The Status of Ireland's Climate 2020*" produced by MET Eireann[3], similarly reflects on clear and distinct impacts arising from climate change effects within an Irish context:

Greenhouse gas emissions continue to rise:

- Background carbon dioxide (CO2) concentrations reached 414 ppm in 2020 which is approximately a 50% increase compared to pre-industrial levels.
- Methane (CH4) concentrations are at 1940 ppb - which is approximately a 170% increase compared to pre-industrial levels.
- Nitrous oxide (N2O) concentrations are now above 330 ppb - which is approximately a 20% increase compared to pre-industrial levels.

Annual average amounts of precipitation are increasing:

- Annual precipitation was 6% higher in the period 1989 to 2018, compared to the 30-year period 1961 to 1990. The decade 2006 to 2015 was the wettest on record.

Annual average air temperature is rising:

- The annual average surface air temperature in Ireland has increased by approximately 0.9°C over the last 120 years, with a rise in temperatures being observed in all seasons.
- An increase in the number of warm spell days the last 60 years with very little change in cold spell duration;

[1] *Source: Sustainable Energy Authority of Ireland (SEAI) website, www.seai.ie*
[2] *Climate Change 2021 'The Physical Science Basis' (Intergovernmental Panel on Climate Change, August 2021)*
[3] *Climate Status Report for Ireland 2020 (Environmental Protection Agency, Marine Institute, Met Éireann, August 2021)*

Sea level continues to rise:

- Satellite observations indicate that the sea level around Ireland has risen by approximately 2-3mm/year since the early 1990s. Analysis of sea level data from Dublin Bay suggests a rise of approximately 1.7mm/year since 1938 which is consistent with global average rates.

The ocean is becoming more acidic:

- Measurements in the surface waters to the west of Ireland between 1991 and 2013 indicate an increase in ocean acidity which threatens calcifying species such as corals, shellfish and crustaceans.

The ocean is getting warmer:

- The average sea surface temperature at Malin Head over the 10 years between 2009 and 2018 was 0.47°C above the 1981-2010 mean.

There is an increase in river flows across most of the country:

- However, there is evidence in recent years of an increase in potential drought conditions especially in the east.

The area of forests and artificial surfaces has increased:

- Land cover observations since 1990 show increases in the area covered by both artificial surfaces and forests and a decrease in wetland areas which include peatlands. There was an increase of 38% in the volume of trees between 2006 and 2017.

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 Policy and Targets

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 in Paris and held 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 of 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.

COP25 Madrid

COP25, the 25th session of the COP, was held between the 2nd and 13th of December 2019 in Madrid. The conference was characterised by repeated warnings from civil society (NGOs and corporates) on emerging evidence and scientific consensus on climate change risk. Specifically, it was noted that there are only c. '*10 years left*' before the opportunity of limiting global warming to 1.5°C is no longer feasible. As such, the only remaining approach to limiting rising global temperatures is a '*7.6% reduction of global GHG emissions every year between 2020 and 2030, and to reach net zero emissions by 2050*'. However, consensus was not achieved between States on finalising the operating rules of the Paris Agreement and to ensure that it became operational by 2020. Three issues which emerged between States from the COP25 are summarised below:

- There was no uniform consensus between States to raise countries' climate ambitions, e.g. to make increased commitments in light of growing climate change data. Some States were opposed to imposing any obligation on countries to submit enhanced pledges by the following year, arguing it should be each country's own decision. All states were required to submit a review of their commitments for COP 26 in 2020. At the current level of climate targets, within a decade, the objective of the Paris Agreement will no longer be achievable;
- There was no agreement on finalising Article 6 of the Paris agreement, the foundations for international cooperation to combat climate change. The aim was to establish the rules for new international mechanisms for financing and transferring GHG emission reductions; and
- There was no agreement on financing (Green Climate Fund); specifically, relating to both loss and damage caused by climate change.

Despite the lack of consensus on the above challenges, the COP25 did achieve more limited success with regard to the introduction of the "*San Jose Principles for High Ambition and Integrity of International Carbon Markets*", which sets out the framework on which a robust carbon market should be built. These principles include, but are not limited to:

- Ensures environmental integrity and enables the highest possible mitigation ambition;
- Delivers an overall mitigation in global emissions, moving beyond zero-sum offsetting approaches to help accelerate the reduction of global greenhouse gas emissions;
- Prohibits the use of pre-2020 units, Kyoto units and allowances, and any underlying reductions toward Paris Agreement and other international goals; and
- Ensures that double counting is avoided and that all use of markets toward international climate goals are subject to corresponding adjustments.

These principles were supported by 23 EU, including Ireland, and Latin American countries, 5 no. pacific islands and 2 no. countries in the Caribbean.

COP26 Glasgow

COP26 took place in Glasgow, Scotland between the 31st October and 12th November 2021. The summit was centred around the fact that "*climate change is the greatest risk facing us all.*" The UK, as hosts for the summit, have developed a ten-point plan to deliver a green industrial revolution, seeking to lead the world in tackling and adapting to climate change.

The key items COP26 seeks to achieve are:

- Secure global net zero by mid-century and keep 1.5 degrees within reach
- Adapt to protect communities and natural habitats
- Mobilise finance
- Work together to deliver

All world leaders at the summit confirmed the need to urgently address the gaps in ambition and work together to achieve climate action.

The summit highlighted that the Paris Agreement is working, with leaders outlining national targets and efforts to further reduce emissions. There was a clear commitment to working together to achieve climate aims, with significant announcements including:

- Over 40 leaders joined the Breakthrough Agenda, a 10-year plan to work together to create green jobs and growth globally, making clean technologies and solutions the most affordable, accessible and attractive option before 2030 – beginning with power, road transport, steel, hydrogen and agriculture.
- Over 120 countries covering more than 90% of the world's forests endorsed the Glasgow Leaders' Declaration on Forests & Land Use committing to work collectively to halt and reverse forest loss and land degradation by 2030, backed by the biggest ever commitment of public funds for forest conservation and a global roadmap to make 75% of forest commodity supply chains sustainable.
- A Just Energy Transition Partnership was announced to support South Africa's decarbonisation efforts; a powerful example of collaboration between an emerging economy and international partners.
- The launch of the Global Methane Pledge saw over 100 countries committing collectively to reduce global methane emissions by 30% by 2030.

COP27 Egypt

COP27 took place in Sharm el-Sheikh from the 6th of November 2022 to the 20th of November 2022. 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:** In Glasgow the previous year, 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:

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

The European Climate Law[4] 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 which is crucial to Europe becoming the world's first climate-neutral continent by 2050 would clearly be assisted by the Proposed Project.

2.2.2 National Climate Policy

Report of the Joint Committee on Climate Action - Climate Change: A Cross-Party Consensus for Action (2019)

In March 2019, the Joint Committee on Climate Action Change released a report detailing a cross party consensus for action. The report in its introduction states that *"Irelands performance in meeting international obligations has to date been poor"* (refer to *'Emissions Projections for Ireland'* below). The Report highlights on-going concern regarding emission projections and growing evidence that Ireland is off track in meeting its 2030 targets under the relevant the EU Directives.

The report states that the transformation of Ireland's energy system will be required for the country to meet its future 2030 and 2050 GHG emission targets; specifically, in order to reach net zero emissions by 2050, Ireland will be required to fully decarbonise electricity generation. Therefore, there is a clear incentive for developing, and safeguarding, Ireland's capacity in renewable energies and renewable electricity. Since this report was published, the Climate Action and Low Carbon Development (Amendment) Act 2021 has been enacted and there have been recent progress / future scenario assessments (e.g. EirGrid's *'Ten-year Generation Capacity Statement 2023–2032'*[6] (January 2024).

[4] *Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')published in the Official Journal on 9 July 2021 and came into force on 29 July 2021.*
[5] *'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality (July 2021)*
[6] https://cms.eirgrid.ie/sites/default/files/publications/19035-EirGrid-Generation-Capacity-Statement-Combined-2023-V5-Jan-2024.pdf

Given the clear concern that the county's future emissions targets may be missed, it is crucial that projects such as the Proposed Project which can contribute in a meaningful manner towards climate change targets and which can be provided without significant adverse environmental effects arising are brought forward and supported with favourable consideration through the planning system and constructed.

Programme for Government – Our Shared Future (April 2021)

The Programme for Government- Our Shared Future was published by the Department of the Taoiseach on the 29th October 2020 (updated in April 2021). This comprehensive document 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 has been updated by the 2021 Climate Action Plan, 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 (Amendment) Act (2021)

The Climate Action and Low Carbon Development (Amendment) Act 2021 ('CALCDA'), which was signed into law on the 23rd July 2021, 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 Action and Low Carbon Development (Amendment) Act 2021 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 project represents a significant opportunity be a nationally important wind energy generator, contributing to the 51% reduction in emissions being sought by 2030, which is as outlined above a legally binding requirement.

The Proposed Project is therefore considered compliant with the relevant policies and objectives set out at both the European (e.g. European Green Deal) and National tiers of governance in this regard.

Carbon Budgets

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[7]. The total emissions allowed under each budget are shown in Table 2-1 below.

Table 2-1 Proposed 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.			

Climate Action Plan 2023

The Climate Action Plan 2023 ('the CAP 23') launched in December 2022, sets out a roadmap to delivery on Ireland's climate ambition. It aligns with the legally binding economy-wide carbon budgets and sectoral ceilings that were agreed by Government in July 2022 following the CALCDA. The CALCDA, commits Ireland to a legally binding target of net-zero greenhouse gas emissions no later than 2050, and a reduction of 51% by 2030.

At the time of publication (December 2022), the key sources of Ireland's greenhouse gas (GHG) emissions include agriculture (33.3%), Transport (15.7%) and Energy (14.4%). Current and future actions require "*the **full implementation** of measures from Climate Action Plans 2023, and further future Climate Action Plans.*" (emphasis added)

CAP 23 sets out indicative ranges of emissions reductions for each sector of the economy. Large-scale deployment of renewables - including onshore wind - is considered 'critical' to help decarbonise the power sector. In relation to achieving the sectoral emissions ceiling for the electricity sector the CAP states:

> *"The proposed pathway includes a massive and rapid build-out of renewable generation capacity (wind and solar power generation technologies) and will also rely on the continued build-out and strengthening of grid infrastructure, the deployment of zero-emissions gas and improved electricity demand management. The decarbonisation of the electricity sector will be an immense challenge as we face a growing demand for electricity and a need to ensure*

[7] *Climate Change Advisory Council Carbon Budget Technical Report (October 2021)* https://www.gov.ie/en/publication/9af1b-carbon-budgets/

security of supply, while providing support for the decarbonisation of other sectors through the electrification of transport and heat."

In relation to the generation of electricity, the CAP 23 emphasis the continued role of onshore wind in addressing the decarbonisation of the electricity sector. Under CAP 23 onshore wind targets of 6GW by 2025 and 9GW by 2030 is set out. An increase in the deployment of renewable energy generation, transformational policies, measures and actions are all called for in the CAP 23. Achieving further emissions reductions between now and 2030 requires a "*major step up*" across three key measures as follows:

- Accelerate and increase the deployment of renewable energy to replace fossil fuels;
- Deliver a flexible system to support renewables and demand;
- Manage electricity demand.

The CAP acknowledges that "Ireland accommodates one of the highest global percentages of variable renewable generation on the grid. However, to maximise the output of renewables, the electricity system must increase its flexibility further."

Climate Action Plan 2024

The Climate Action Plan 2024 ('the 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).

The 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.

The 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 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."

The CAP 24 identifies the alignment of local and national policy as critical to accelerate renewable energy rollout.

"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".

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.

2.2.3 Climate Target Progress

Ireland's Greenhouse Gas Emissions Projections (2021 – 2040), June 2022

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 2021–2040'* 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 there will be 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 recent CAP 24 measures.
- Emissions from the Energy Industries sector are 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.

2.3 Renewable Energy Policy and Targets

This section of the EIAR provides a breakdown of international and national renewable energy policy with regards to the Proposed Project. Under the national policy energy section, the following are discussed:

- EU Renewable Energy Policy;
- National Renewable Energy Policy;
- International and National Target Progress.

National policy has developed in line with European and International policies, targets and commitments, in that the importance and urgency of decarbonising the energy generation sector, the economy in general and reducing greenhouse gas emissions has become increasingly more apparent.

The Proposed Project complies with the nationally stated need to provide a greater amount of renewable energy onto the national grid and will further reduce the national reliance on fossil fuels for electricity generation.

2.3.1 EU Renewable Energy Policy

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 2020 Annual Review (September 2020) that, "*while the share of renewable electricity generation, particularly wind, is increasing [in Ireland], the [overall] pace of decarbonisation of the [electricity generation] sector needs to accelerate*", as it is not compatible with a low-carbon transition to 2050. 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.

2030 Climate and Energy Framework

The 2030 Climate and Energy Framework (adopted by EU leaders in October 2014) represents the current governance system underpinning EU renewable energy policy. The framework defines EU wide renewable energy targets, which builds on the 2020 climate and energy package:

- A binding commitment at EU level of at least 40% domestic Green House Gas reduction by 2030 compared to 1990;
- An EU wide, binding target of at least 27% renewable energy by 2030; and
- An indicative EU level target of at least 27% energy efficiency by 2030.

Effort sharing 2021-2030

The European Commission published its proposal for an Effort Sharing Regulation on the allocation of national targets for greenhouse gas emissions for the period 2021-2030 in May 2018. The Effort Sharing legislation forms part of a set of policies and measures on climate change and energy that will help move Europe towards a low-carbon economy and increase its energy security. Under the current

Regulation, the national targets will collectively deliver a reduction of around 10% in total EU emissions from the sectors covered by 2020 and of 30% by 2030, compared with 2005 levels.

The proposal implements EU commitments under the Paris Agreement on climate change (COP21), discussed above in Section 2.1.1.1, and marks an important milestone in the allocation to Member States of a package of climate targets formally adopted as part of the 2030 Climate and Energy Framework.

Renewable Energy Directive (EU) 2018/2001

The revised Renewable Energy Directive (EU) 2018/2001 came into force in December 2018. It establishes a binding EU target of at least 42.5%. The revised Directive sets a 2030 target of 32.5% energy from renewable sources

European Green Deal/ Renewable Energy Directive

The European Green Deal was launched in December 2019 and proposes to increase the binding target of renewable sources in the EU's energy mix from 32% to 40% by 2030 via amendments to the Renewable Energy Directive (Renewable Energy Directive) as per the 'Fit for 55' package (July 2021)[8].

On 30 March 2023, a provisional agreement was reached for a binding target of at least 42.5% by 2030, but aiming for 45%. Once this process is completed, the new legislation will be formally adopted and enter into force. The agreement includes targets and measures to support the uptake of renewables across various sectors of the economy. The revised Directive strengthens annual renewables targets for the heating and cooling sector and for renewable energy used in district heating systems. It introduces a specific renewable energy benchmark of 49% for energy consumption in buildings by 2030 to complement EU buildings legislation and guide Member States' efforts.

This supports Member States in making the most of their cost-effective renewable energy potential across sectors through a combination of sectoral targets and measures. It aims at making the energy system cleaner and more efficient by fostering renewables-based electrification and, in sectors such as industry and transport where this is more difficult, it will promote the uptake of renewable fuels.

REPowerEU Plan

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.

Article 3 of the REPowerEU plan is centred around the roll out of renewable energy projects in order to accelerate the phasing out of Russian fossil fuels. 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

[8] *https://www.consilium.europa.eu/en/policies/eu-plan-for-a-green-transition/*

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'*. Article 3 of the plan states that:

> *"Slow and complex permitting processes are a key obstacle to unleashing the renewables revolution and for the competitiveness of the renewable energy industry."*

The REPowerEU plan also presents measures to streamline the permitting process at a national level and outlines best practices within member states. Article 3 of the REPowerEU plan also states that member states should take steps to introduce permitting related country specific recommendations in the European semester. The plan also states that all member states must as a matter of urgency, fully implement the Renewable Energy Directive in order to simplify the permitting procedures.

The RePowerEU plan also operationalises the principle of renewable energy development as ***"an overriding public interest".*** This coupled with the introduction of "go-to" areas and other ways to shorten and simplify permitting while also minimising potential risks and negative impacts on the environment further highlights the importance at EU level of the increased provision of renewable energy projects such as the Proposed Project. At the time of writing, Ireland has not yet designated areas for the development of renewable energy projects however, the proposed directive eliminates the member states' option to opt out and, instead, mandates that they designate sufficient areas for accelerating renewables within a period of 18 months.

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. The Proposed Project also offers an opportunity to increase the amount of indigenous renewable energy onto the national grid thereby further increasing Irelands energy security National Renewable Energy Policy

2.3.1.2 Project Compliance with EU Policy

The Proposed Project is considered to be fully in accordance with and supported by the above-mentioned EU Policy. The Proposed Project is in line with the targets outlined in the 2030 Climate and Energy Framework. 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 can be achieved through the delivery of the Proposed Project and other similar projects. The target of increasing the binding target of the EU's energy mix from 32% to a minimum of 42.5% by 2030 is also considered to be a target that would be achievable by the construction of schemes such as the Proposed Project. Similarly, the Energy Roadmap 2050 envisions scenarios aimed at realizing the EU's climate action and energy objectives. It highlights that across all scenarios, the primary source of energy supply technologies in 2050 is projected to be 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.

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 June 2020 (updated in January 2021) 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, 2022

More recently, 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 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 (2020) report, oil accounts for 54% of Ireland's primary energy requirement making it one of the highest rate 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.

The Government published an update to this in November 2023 which outlines a new strategy to ensure energy security in Ireland for this decade, while ensuring a sustainable transition to a carbon neutral energy system by 2050. The Energy Security Package emphasizes the need to prioritize, monitor, and regularly review energy security during the transition period. It proposes measures focusing on:

1. Reduced and Responsive Demand
2. Transition to Renewables
3. Building More Resilient Systems
4. Implementing Robust Risk Governance

The report details mitigation measures under each area, such as expanding indigenous renewable energy capacity, diversifying fuel sources, and enhancing governance structures. Lessons from European energy supply disruptions and domestic electricity sector challenges inform the strategic approach.

Six key pillars guide the response and recommendations outlined in "Energy Security in Ireland to 2030," which includes a public consultation and external reviews. The Government plans to release follow-up reports every five years, with implementation oversight by the Governments Energy Security Group.

Having regard to the above, it is clear that the provision of 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.

2.3.3 Renewable Energy Target Progress

The SEAI *Energy in Ireland 2023* was published in December 2023 and set outs the most recent updates to Ireland's progress towards its binding European and National renewable energy targets. Some of the key points from this report are outlined below (from 2022):

- Ireland imported 81.6% of its total primary energy requirement.
- 85.8% of Ireland's primary energy requirement came from fossil fuel.
- Ireland's total energy demand was 4.7% higher than in 2021.
- Demand for electricity was 2.5% higher than in 2021, consistent with the annual growth of recent years.

The SEAI report illustrates (Figure 6) the summary of sectoral ceilings within the first two carbon budgets, over the periods 2021-2025 and 2026-2030 – copied below in Figure 2-1.

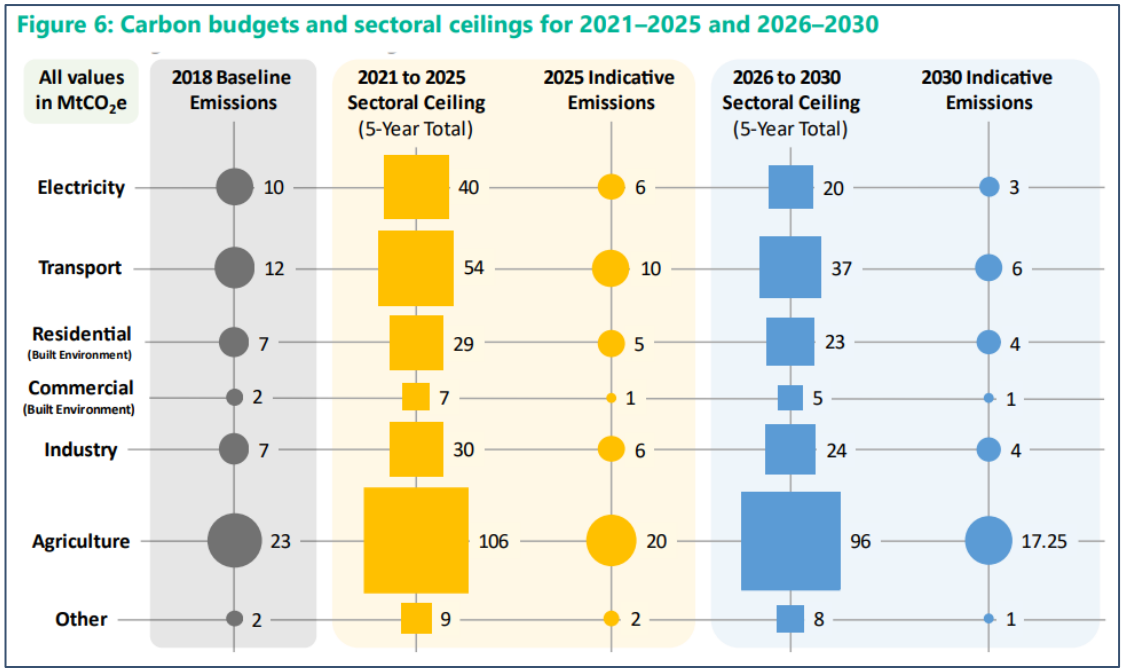


Figure 2-1 Carbon Budgets and Sectoral Ceilings for 2015-2025 and 2026-2030 (SEAI Energy in Ireland 2022)

The emissions ceiling for the electricity sector from 2021 to 2025 stands at 40 MtCO2e in total, with an annual average of 8 MtCO2e (indicated by the dotted bars). In the initial two years of this period, sectoral emissions totalled 19.74 MtCO2e, leaving a remaining budget of 20.26 MtCO2e for 2023-2025, equivalent to an annual average of 6.75 MtCO2e (shown by the dark grey bars). The report confirms that wind accounted for 84% of renewable electricity generated in 2021 having 4339MW of installed wind capacity in 2021. Up to September 2022, the report confirmed 78MW of added wind capacity.

Security of supply is a focus in the report, noting "*Ireland's import dependency [of energy] has been increasing steadily, as the output from the Corrib gas field reduces faster than we are adding new renewable sources.*" In 2021 Ireland's import dependency for energy was 80%; ranked eighth highest of the 27 Member States in terms of import dependency in 2020, the last year in which full data was available.

In order to reduce Irelands emissions there is a need to increase the renewable share of electricity, heat and transport. Up until 2020, renewable energy targets and results were set and calculated under the rules and methodologies of the first EU Renewable Energy Directive (REDI) however, from 2021 onwards, renewable results must be calculated under the REDII methodology. This updated Directive contains stricter requirements on the countability of biomass, biogas, and biofuels, as they relate to our renewable energy share (RES) results. The second EU Renewable Energy Directive (REDII) continues to promote the growth of renewable energy and set renewable energy share (RES) targets out to 2030. The changes in criteria and caps under REDII change how the RES results in 2021 are calculated compared to 2020, even where there is little to no change in the underlying renewable energy:

Table 2-2 National renewable energy targets

	2020	RES 2020 Note	2021*	Note	New 2030 Target
Overall RES	13.6%	Ireland failed to meet its target of 16%	12.5%	Drop is almost entirely due to the shift in the REDII methodology	34.1%
RES-T (Transport energy from renewable	10.2%	Ireland achieved its target of 10%	4.3%	Drop is almost entirely due to the shift in REDII methodology.	14%

	2020	RES 2020 Note	2021*	Note	New 2030 Target
energy sources)					
RES-E (Electricity from renewable energy sources)	39.1%	Ireland failed to meet its target of 40%	36.4%	RES-E fell by 2.6% to 36.4% with over half this drop due to the shift in the REDII methodology and exclusion of some biomass; the remaining drop was due to reduced renewable electricity generation due to less wind in 2021.	70%
RES-H (Heat from renewable energy sources)	6.3%	Ireland failed to meet its target of 12%	5.2%	This decrease in RES-H is mainly due to the shift in REDII methodology and the introduction of new sustainability and verification criteria for biomass fuels.	24%

**calculated under the new REDI methodology*

RED III sets an overall European renewable energy target of at least 42.5% by 2030. There will be 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.

The second mandatory target set by the RED related to the renewable energy share in transport sector. This is commonly referred to as the RES-T target. The 2020 RES-T target was for at least 10% of energy consumed in road and rail transport to come from renewable sources. The actual RES-T achieved in 2020 was 10.2%, meaning that Ireland did meet this target. REDII sets a new RES-T target of 14% by 2030.

The RES-E target to 2030 of 70% ensures that "*renewable electricity continues to form the backbone of our renewable energy use for the coming decade and beyond.*"

The Climate Advisory Council (CCAC) notes 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. The CACC stress the importance of reducing emissions in the electricity sector given the reliance of other sectors on the successful decarbonisation of the electricity sector.

EirGrid's analysis presented in *'All Island Generation Capacity Statement 2022 – 2031'* (October 2022) found that the existing generation capacity is poor. Some generation capacity, due to close in September 2023, have submitted notices that they will not be available throughout 2022 and 2023. This represents 590 MW (rated) that will be unavailable to the national grid. Furthermore, a sizable portion (364MW) of the forecasted new generation has failed to materialise, with developers terminating their capacity market contracts. These issues combined with existing social and economic growth driving electricity demand upwards means that the new generation capacity, especially renewable electricity, is urgently required. The scale of the capacity issue is clear, with significant capacity deficits forecasted across all for the remainder of the decade. EirGrid's most recent analysis presented in '*Ten-Year Generation Capacity Statement 2023–2032'* (January 2024) found that Generator performance continues to be poor. A slight improvement was noted in forced outages, between 2022 and 2021, however availability of conventional generation remains a cause for concern. This low availability negatively impact the long-term adequacy position. It is further noted that since the previous year's Generation Capacity Statement, 455 MW of previously awarded capacity has been withdrawn and the developers

have paid termination charges, in addition to the previous 630 MW which was terminated. This means that most new predictable capacity that was expected to come online over the coming years has now withdrawn. In this context, the importance of wind energy becomes more apparent as it is estimated that 1 MW of wind capacity can provide enough electricity to supply approximately 650 homes[9].

With regard to the requirements needed to achieve the ambitions targets set in the Governments CAP 24, it is stated that:

> *"The electricity sector continues to face an immense challenge in meeting its requirements under the sectoral emissions ceiling, as the decarbonisation of other sectors, including transport, heating, and industry, relies to a significant degree on electrification. The deployment rates of renewable energy and grid infrastructure required to meet the carbon budget programme for electricity is unprecedented and requires urgent action across all actors to align with the national targets."*

CAP 24 also states the following in relation to onshore wind:

> *"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."*

EirGrid have also released their *Strategy 2020-2025: Transform the Power System for Future Generations* which is driven by climate change and the need to transform the electricity sector. Currently, the electricity grid can operate with up to 65% of renewable power but by 2030 this must increase to 95%. SEAI 's National Energy Projections to 2030 notes that wind energy deployment has "*made the most significant contribution to RES-E to date. The historic build rate (2005-2010) was 180MW per year. Since 2010 the build rate has increased to an average of over 200MW per year. In 2017 the installed capacity increased by 335MW to just over 3.3GW total installed capacity."* Furthermore, "*Post 2020, as electricity demand continues to grow at an anticipated rate of 3% per annum, increasing levels of deployment will be needed just to maintain the share achieved in 2020."*

The National Energy Projections published by SEAI in November 2023 notes that:

- *"Even with full delivery of the CAP23, the energy sector will likely still be off track to keep within its share of Ireland's national legally binding carbon budget for the first two budget periods. It will also likely be off track to meet the 2030 final energy use reduction target set by the revision to the EU Energy Efficiency Directive.*
- *Current projections indicate that if the 2023 Climate Action Plan targets are fully delivered the energy sector could deliver on its current EU 2030 renewable energy target, though interim targets are unlikely to be met.*
- *Early corrective action is crucial; the earlier that annual emissions are reduced, the greater the impact on the growth of cumulative emissions. The fast tracking of all actions could make a significant impact.*
- *Unless greenhouse gas emissions are reduced sharply between now and the end of 2025, it is highly unlikely that we will be able to stay within budget out to 2030.*
- *Further new measures, combined with an acceleration of planned and existing measures, are now necessary to comply with Ireland's legally binding carbon budgets and to reduce total final energy demand in line with the EU target."*

Ireland faces significant challenges through efforts to meet its renewable energy targets, EU targets for renewable energy by 2030 and its commitment to transition to a low carbon economy by 2050. The

[9] https://www.iwea.com/about-wind/faqs

Proposed Project will aid Ireland in addressing these challenges as well as addressing the country's over-dependence on imported fossil fuels.

Through the production of renewable energy which will connect to the national grid the Proposed Project has the potential to contribute to meeting the country's binding targets.

2.4 Strategic Planning Policy Context

2.4.1 Introduction

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
- Other Relevant Material Considerations

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. The specific compliance with the County Development Plan provisions is outlined in Section 2.4.4 below.

2.4.2 National Policy Context

National Planning 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. In order 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 Proposed Project, 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.

Also relevant to the Proposed Project is **Objective 55** which 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 2.1). 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"*.

2.4.2.2 Project Compliance with the National Planning Framework

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. The Proposed Project, if consented, will aid in reaching the targets of reducing GHG emissions from the energy sector and further strengthen Ireland's energy security. This 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. As such, it is considered that the Proposed Project is in line with the National Planning Framework.

This shift from fossil fuels is dependent 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 11 no. wind turbines 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.

National Development Plan 2021 – 2030

The National Development Plan 2021 – 2030 (NDP) was published on the 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. 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 ambitious and an explicit driver for the deployment of new renewable generators e.g. the Proposed Project and the safeguarding / maintenance of existing assets. It is noted that the reliability of electricity supplies will also be strengthened through investment in the electricity

transmission and distribution grid. The focus of investment in regulated network infrastructure is to contribute to a long-term, sustainable and competitive energy future for Ireland.

2.4.2.3 Project Compliance with National Policy

The Proposed Wind Farm of 11 No. wind turbines and associated infrastructure is also considered to be in line with National Policy objectives as outlined in section 2.4.2. The CAP 24 as outlined herein was published to outline national actions required to meet EU climate targets. According to CAP 24, Ireland aims to utilise its native renewable resources and has set a goal of reaching 80% renewable energy production by 2030 and produce 9GW of wind by 2030. Measures are also outlined to accelerate the delivery of onshore wind. It is therefore considered that the Proposed Wind Farm of an additional 11 No. wind turbines with an approximate electricity generation capacity of 56 MW would greatly aid Ireland in achieving its national targets and will also assist in reaching the renewable energy and carbon emission reduction targets at EU level.

The National Energy Security Framework identifies a number of measures to fast-track Ireland's transition to renewable energy. With regard to this, 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 and enhance energy security.

2.4.3 Regional Policy Context

2.4.3.1 Northern and Western Regional Spatial and Economic Strategy

The Northern and Western Regional Assembly (NWRA) has a recognised leadership role in setting out regional policies and coordinating initiatives which support the delivery and implementation of the National Planning Framework (NPF). The primary vehicle for this is the preparation and implementation of the Regional Spatial and Economic Strategy (RSES).

The North and Western region is characterised by the RSES as having '*a unique natural endowment of ample carbon-neutral, energy supplies*' such as wind. Specifically, the Western Region is stated as being *'particularly rich'* in renewable energy resources dispersed across the region. The RSES acknowledges that the region has a pivotal role in delivering a successful transition to Ireland's proposed low carbon economy with huge potential for growth in renewables. As such, there is '*still significant potential*' for all new renewable energy outputs to the grid. In order to facilitate the growth of renewables within the region, the RSES notes that the NWRA aims to encourage stakeholders, i.e. industry, commercial etc., to be the first to facilitate new opportunities and concentrate on possibilities to further advance renewable energy generation and use.

These strategic aims are captured in Policy Objectives 4.16, 4.17 and 4.18:

- ***RPO 4.16:*** *The NWRA shall co-ordinate the identification of potential renewable energy sites of scale in collaboration with Local Authorities and other stakeholders within 3 years of the adoption of the RSES. The identification of such sites (which may extend to include energy storage solutions) will be based on numerous site selection criteria including environmental matters, and potential grid connections.*
- ***RPO 4.17:*** *To position the region to avail of the emerging global market in renewable energy by stimulating the development and deployment of the most advantageous renewable energy systems, including:*
    - *Stimulating the development and deployment of the most advantageous renewable energy systems;*

- *Raising awareness and public understanding of renewable energy and encourage market opportunities for the renewable energy industry to promote the development and growth of renewable energy businesses; and*
- *Encourage the development of the transmission and distribution grids to facilitate the development of renewable energy projects and the effective utilisation of the energy generated from renewable sources having regard to the future potential of the region over the lifetime of the Strategy and beyond.*

- ***RPO 4.18**: Support the development of secure, reliable and safe supplies of renewable energy, to maximise their value, maintain the inward investment, support indigenous industry and create jobs.*

As indicated above, there is a clear policy support within the region to identify and capitalise on emerging opportunities associated with the transition to a decarbonised economy such as renewable energy generation. It should be noted, however, that the existing transmission network within the region is predominantly 110 kV with very little higher capacity 220kV and 400kV transmission infrastructure. As such, the RSES endorses the future development of the grid in order to safely facilitate more diverse power flows from surplus regional generation and also to facilitate future growth in electricity demand:

a) ***RPO 8.3:** The Assembly support the necessary integration of the transmission network requirements to allow linkages with renewable energy proposals at all levels to the electricity transmission grid in a sustainable and timely manner.*
b) ***RPO 8.4:** That reinforcements and new electricity transmission infrastructure are put in place and their provision is supported, 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. Ensure that development minimises impacts on designated areas.*

The RSES is ultimately supportive of the future growth of renewable energy technology in the region and sets a clear precedent to identify and capitalise on those opportunities associated with the transition to renewable energy generation.

2.4.3.2 Project Compliance with Regional Policy

The RSES for the Northern and Western Region states that the region has a crucial role to play in Ireland transition to a low carbon future. It is considered that the provision of the Proposed Project would facilitate this just transition and is particularly in line with RPO 4.17 and 4.18 as outlined above. In the region, a noticeable trend has emerged to recognize 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 Proposed Project is considered to be in line with Regional Policy.

2.4.4 Local Policy

The site falls across the administrative area of Galway County Council and therefore, is subject to the planning policies and objectives set out within the extant Galway County Development Plan 2022-2028.

2.4.4.1 Wind Farm Site

2.4.4.2 Galway County Development Plan 2022-2028

The Galway County Development Plan 2022 – 2028 (the GCDP) was adopted by the Elected Members of Galway County Council at the conclusion of the Special Meeting on the 9th of May 2022 and came into effect on the 20th of June 2022. The GCDP is the statutory county development plan in effect for the County and provides the framework against which all planning applications for development in the county are assessed.

The policies and objectives set out within the GCDP have maintained strong linkages with the key aims and themes set out within the previous development plan. Climate change is again emphasised as one of the greatest global challenges with Galway County Council acknowledging that continual action is needed for Galway to become a low carbon and climate resilient county. Please refer to the accompanying Planning Report submitted with this application which contains a detailed planning assessment of the Proposed Wind Farm against all relevant policies and objectives in the GCDP.

The importance of climate action is outlined at the beginning of this chapter as it states, *"climate action is integrated into every chapter and strategy of the plan"*. The strategic aim of this chapter is outlined below:

> *"To reduce the carbon footprint by integrating climate action into the planning system in support of national targets, support indigenous renewable sources in order to reduce dependence on fossil fuels and improve security of supply and the move to a competitive low carbon economy."*

The GCDP recognises that an efficient and secure energy supply is essential to the future growth and sustainable development of County Galway:

> *"Reliable and low-cost energy is essential for a high quality of life for the residents of County Galway and also to ensure that the County is an attractive place in which to do business. However, it is essential to ensure that energy demands are met without compromising environmental quality. Energy efficiency, renewable energy development and progression towards a low carbon economy are therefore central themes of this Plan."*

The GCDP presents an "Energy Expectation" for Galway to 2028. The relevant expectations and how the Proposed Project is in compliance with these expectations is set out in Table 2-3 below:

Table 2-3 Galway CPD Energy Predictions

Energy Expectation	Proposed Project Compliance
"A reduction in demand for non-renewable energy sources, such as coal and oil, as well as an increased demand for electricity from all sectors, leading to more sustainable energy usage across the county."	The Proposed Project will generate clean, renewable electricity, which can be integrated into the grid to meet the increasing demand for electricity across various sectors. By supplying sustainable renewable energy, the Proposed Project will reduce the need for non-renewable sources like coal and oil, helping to transition toward cleaner energy usage in the county.
"A significant increase in the demand for electricity is predicted resulting in a decrease in utilisation of fossil fuels. A large factor in this will be the Transport sector, as electric vehicles are	Wind-generated electricity can power electric vehicles (EVs). As wind farms contribute to the grid's capacity, the increase in clean energy availability can support the growth of EVs. This transition from traditional gasoline and diesel

developed and become more widespread, the oil usage by the sector is projected to decrease."	vehicles to EVs leads to a decrease in oil usage, especially in the transport sector, and can be supported by renewable electricity generation.
"A significant reduction in the use of coal and peat for home heating is anticipated due to advances in home heating technology, improvements in home insulation and new laws restricting the burning of fossil fuels for home heating due to environmental and climate change obligations."	Projects such as the Proposed Project are a critical component in decoupling the county from reliance on fossil fuels. By generating renewable energy, wind farms contribute to achieving the long-term goal of replacing fossil fuels with sustainable energy sources. This aligns with the Strategy for Renewable Energy 2012 - 2020, emphasizing a transition away from traditional non-renewable fuels in the energy sector.
"In the longer-term fossil fuels will be replaced by renewable energy sources in County Galway in line with the Strategy for Renewable Energy 2012 – 2020 which is aimed at decoupling energy from reliance on fossil fuels."	

2.4.4.3 Local Authority Renewable Energy Strategy

County Galway's Local Authority Renewable Energy Strategy (LARES) is included as Appendix 1 of the GCDP. The LARES for Galway sets out guidance designed to allow County Galway to both contribute to meeting the national legally binding targets while also capitalising on those opportunities associated with the generation and harnessing of renewable energy in a sustainable manner. The vision as outlined in the LARES is as follows:

> *"To facilitate and encourage renewable energy generation and a low carbon energy transition across County Galway, in the interests of future generations, through the application of energy efficient technology and the harnessing of indigenous renewable energy resources, whilst respecting the need to conserve areas of environmental, cultural and economic value."*

The LARES *"encompasses the entire county of Galway, and comprehensively considers the key sources of renewable energy in the county. The role of non-renewable energy, such as gas, is also incorporated into the LARES to facilitate the transition to a low carbon economy."*

The following relevant key objectives in the LARES in relation to the Proposed Project are identified in Table 2-4 below:

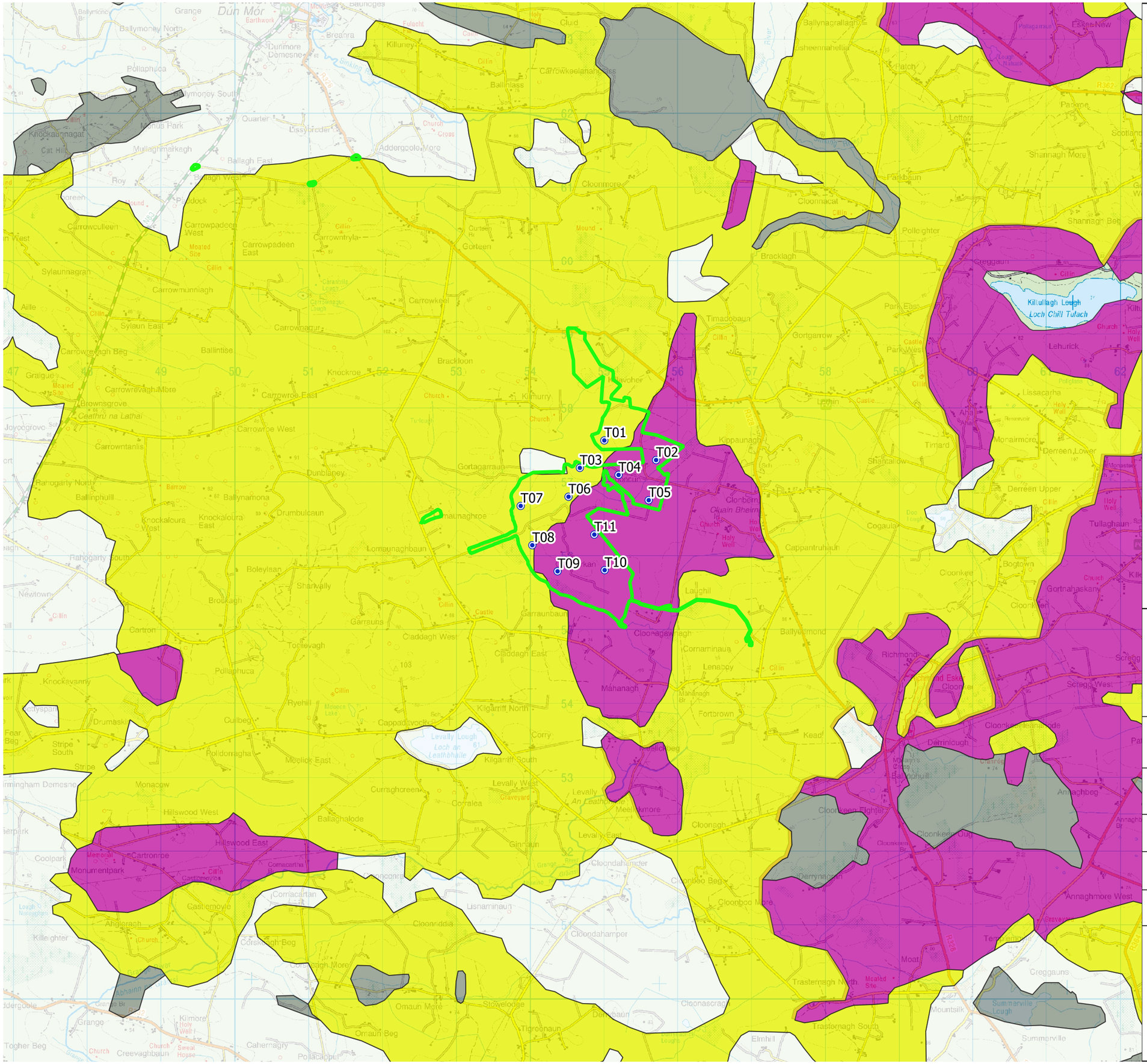
Table 2-4 Relevant policy from the LARES in relation to the Proposed Project

Policy	Description	Proposed Project Compliance
LARES Policy Objective 3 - Renewable Energy Generation	*"To facilitate and support appropriate levels of renewable energy generation in County Galway, in light of the need to transition to a low carbon economy and to reduce dependency on fossil fuels."*	The Proposed Project will facilitate the production of renewable energy and will contribute to meeting the country's binding targets in relation to renewable energy, helping the transition to a low carbon economy.
LARES Policy Objective 13 Wind Energy Generation	*"To increase renewable energy generation levels from wind energy developments in County Galway, given the recognised wind energy potential of the County."*	The Proposed Project has the potential to generate c79.2MW of renewable energy which will be connected to the National grid and will contribute towards increased renewable energy

Policy	Description	Proposed Project Compliance
		generation from wind energy in County Galway.
LARES Policy Objective 14 National Wind Energy Guidelines	*"All onshore wind energy developments shall comply with the National Wind Energy Development Guidelines or any subsequent version thereof"*	The Proposed Project has been designed in accordance with all relevant planning policy requirements including the 2006 Wind Energy Development Guidelines (the Guidelines) and the 2019 draft Wind Energy Development Guidelines (the draft Guidelines).
LARES Policy Objective 15 Acceptable in Principle	*"Wind energy development proposals in the areas that are 'Acceptable in Principle' for renewable energy development will be considered in accordance with the LARES and the proper planning and sustainable development of the area."*	The Proposed Project is partially located in an area classified as 'Acceptable in Principle' (6 of 11 turbines) in the LARES, aligning with its policy objectives, and is fully in accordance with all relevant development management standards, policies and guidelines.
LARES Policy Objective 16 Open to Consideration	*"Wind energy development proposals in areas that are identified as 'Open to Consideration' for wind energy development will be considered in accordance with the LARES and the proper planning and sustainable development of the area."*	The Proposed Project is partially located in an area classified as 'Open to Consideration' (5 of 11 turbines) in the LARES, aligning with its policy objectives, and is fully in accordance with all relevant development management standards, policies and guidelines.

A primary aim of the LARES is to set out one integrated, comprehensive suite of policy objectives for renewable energy development in Galway that seek to encourage wind energy developments at appropriate locations and to guide the location and design of new proposals. The LARES identifies areas within the County according to a hierarchy from the most optimal down to areas not generally considered suitable. There are five categories within the LARES as follows:

- **Strategic Areas** - Areas where existing wind developments are situated which have already been subjected to detailed legal and development management processes.
- **Acceptable In Principle** - Areas where Wind Energy development will be facilitated as an appropriate landuse.
- **Open To Consideration** - Areas where Wind Energy development is likely to be favourably considered - subject to the results of more detailed assessment of polices and potential effects.
- **Generally to be discouraged** - Areas where Wind Energy development is unlikely to be favourably considered on account of potential to adversely effect protected landscape, water, ecological resources and residential amenity.
- **Not Open to Consideration** - Areas where Wind Energy Projects, would be likely to conflict with policies of the council to protect landscape, water, ecological resources and residential amenity.



Map Legend

- Site Boundary
- Proposed Turbine Layout

County Galway Wind Energy Strategy 2022-2028 Policy Areas

- Acceptable In Principle
- Generally to be Discouraged
- Not Normally Permissible
- Open to Consideration
- Strategic Areas

Drawing Title
Co. Galway Wind Energy Designations

Project Title
Clonberne Wind Farm

Drawn By	Checked By
JF	OC
Project No.	Drawing No.
180740	Fig. 2-2
Scale	Date
1:50,000	2024-01-17

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As shown in Figure 2-2 above, the LARES classification (outlined in the LARES Map 15) that applies to the Proposed Project site is 'Acceptable in Principle' (AIP) (6 of the 11 turbines) and 'Open To Consideration' (OTC) (5 of 11 turbines). The LARES outlines that applications for wind turbines in the AIP areas are areas where wind energy development will be facilitated as an appropriate land use, subject to conformance with the LARES and the proper planning and sustainable development of the area. Wind turbines located in OTC areas are open to development, also subject to conformance with the LARES and the proper planning and sustainable development of the area.

Having regard to the above, the following section sets out a brief summary of how the Proposed Project complies with the mitigation requirements applicable to such a development. MAP 15 of the LARES was created by mapping individual factors. Each factor is assigned a 'priority' and identified as a 'opportunity' or 'sensitivity'. Figure 2-3 below has been extracted from the LARES and demonstrates the factors identified as sensitivities and opportunities within the LARES.

Factor as Opportunity or Sensitivity				
	Wind	**Solar**	**Hydro**	**Bio**
Energy Network	Opportunity	Opportunity	Opportunity	Opportunity
Road Network	Opportunity	Opportunity	Opportunity	Opportunity
Population Density	Sensitivity	Sensitivity	Sensitivity	Sensitivity
Settlements	Sensitivity	Sensitivity	Sensitivity	Sensitivity
Land Use	Opportunity	Opportunity	Neutral	Opportunity
Slope	Sensitivity	Opportunity	Opportunity	Sensitivity
Elevation	Opportunity	Opportunity	Opportunity	Neutral
Protected Areas	Sensitivity	Sensitivity	Sensitivity	Sensitivity
Flooding	Sensitivity	Sensitivity	Opportunity	Sensitivity
Landslide	Sensitivity	Sensitivity	Sensitivity	Sensitivity
Wind Speed	Opportunity	Opportunity	Neutral	Neutral
Aspect	Opportunity	Opportunity	Neutral	Neutral
Solar Radiation	Neutral	Opportunity	Neutral	Neutral
Crop potential	Neutral	Opportunity	Neutral	Opportunity

Figure 2-3 Factors Categorised as Opportunities or Sensitivities for Each Type of Renewable Energy (Extracted from the LARES)

The Proposed Wind Farm site was examined against the relevant factors as outlined in Figure 2-3 above. The examination of the Proposed Project against these factors is outlined in Table 2-5 below.

Table 2-5 Opportunities and Sensitivities of the Site

Opportunities		Sensitivities	
Energy Network (High priority)	Proximity to existing Cashla – Flagford 220kV overhead line at Laughil	**Pop. Density (High priority)**	>20 and <= 50 (Second lowest population category)
Road Network (High priority)	Proximity to the National Road Network (N83)	**Settlements (High priority)**	Not situated in the excluded settlement areas
Land use (Medium priority)	Small-scale agriculture with pockets of commercial forestry, low-density residential, public road corridors and cut peat	**Slope (Medium priority)**	Lowest rating (less than 10 degrees)
Elevation (High priority)	65 – 80 mAOD	**Protected Areas (High priority)**	Not located within the excluded

Opportunities		Sensitivities	
			landscape, geological, natura 2000 or natural heritage area sites
Wind Speed (High priority)	5.50 - 5.70 m/s	**Flooding (Medium priority)**	Does not overlap with fluvial & Coastal flood areas
		Landslide (High priority)	Low (inferred)

As set out in this EIAR and the accompanying Planning Report, the Proposed Wind Farm has been designed in accordance with the opportunities and sensitivities set out in the LARES and presents an appropriate and suitable opportunity for wind energy development. Having regard to the factors listed above, the Proposed Wind Farm is in close proximity to the existing energy transmission network and road network, requires minimal vegetation removal and has suitable wind speeds. Furthermore, the Proposed Wind Farm has few sensitivities constraining wind energy development. The site is not prone to landslides or flooding and is not located within an ecologically protected area. The population density is between 20 and 50 persons per square kilometre which is the second lowest category on the population density map. As such it is considered that the Proposed Wind Farm is in accordance with the aims and objectives of the LARES and represents an opportunity to increase the supply of renewable electricity to the national grid on a suitable site.

2.4.4.4 Grid Connection

In relation to electricity, it is the policy objective of the Council to work in conjunction with Eirgrid to protect existing electricity infrastructure, and to facilitate the timely delivery of new electricity infrastructure. As such, the Council have stated their support of EirGrid's *Implementation Plan 2017-2022* and *Transmission Development Plan 2016* and notes that strong electricity infrastructure and transmission grid is essential in order to meet the Country's critical climate change targets. In that vein the GCDP states

> *"A strong electricity infrastructure and transmission grid is essential for the county in order to attract and retain high-tech industrial investment, to ensure competitive energy supplies, to achieve balanced development, to reduce dependency on fossil fuels, and to achieve climate change targets."*

Specific relevant policies of the Plan in relation to the proposed Grid Connection are included in Table 2-6 below:

Table 2-6 Policy Objectives of the GCDP relating to the proposed Grid Connection

Policy	Description	Proposed Project Compliance
EG1 Enhancement of Electricity Infrastructure	*"Support and promote the sustainable improvement and expansion of the electricity transmission and distribution network that supply the County, while taking into consideration landscape, residential, amenity and environmental considerations."*	The Proposed Project will include 220kV infrastructure to facilitate the connection and distribution of the renewable energy generated by the Proposed Wind Farm.
EG 2	*Support the provision and extension of electricity and gas transmission networks*	The Proposed Project supports the provision of a secure and reliable

Policy	Description	Proposed Project Compliance
Delivery of Electricity and Gas Infrastructure	*within the county which are critical to the economic development of the County subject to environmental quality, landscape, wildlife, habitats or residential amenity.*	electricity transmission infrastructure and transmission grid which is vital to ensure that a reliable electricity supply is available.
EG3 Power Capacity	*"To support and liaise with statutory and other energy providers in relation to power generation, in order to ensure adequate power capacity for the existing and future needs of the County"*	The Proposed Project will contribute positively to the levels of renewable electricity on the national grid. This will aid in ensuring there is adequate capacity for the growing energy needs of the Country.
EG4 Ireland's Grid Development Strategy	*Support the implementation of Ireland's Grid Development Strategy, while taking into account landscape, residential, amenity and environmental considerations.*	The Proposed Project will support the the implementation of Ireland's Grid Development Strategy by contributing to the establishment of a secure and dependable electricity transmission grid. The Proposed Project has been subject to a rigorous design process informed by comprehensive planning and environmental assessments and surveys, which have collectively concluded that the proposal is in line with proper planning and sustainable development of the area.

2.4.4.5 Summary Conclusion on Local Policy for County Galway

In summary, the GCDP fully recognises the importance of tackling climate change and deriving more energy from renewable sources. Galway County Council seeks to support and facilitate the sustainable provision of a reliable energy supply in the County, with emphasis on increasing energy supplies derived from renewable resources. Furthermore, there are a range of policies in place which support the development of renewable energy.

Accordingly, the Proposed Project is considered to be compliant with the relevant provisions of the GCDP and represents proper planning and sustainable development in the Plan area.

2.4.5 Other Relevant Material Considerations

Renewable Energy Support Scheme

The CAP 24 is the Government's plan to give Irish people a cleaner, safer and more sustainable future to halve emissions by 2030 and reach net zero no later than 2050. The Plan sets out actions across every sector which will ensure we meet our future climate commitments. A key part of CAP 24 is to increase the proportion of renewable electricity to up to 80% by 2030 and a target of 9GW from onshore wind. These measures will be driven by introduction of the Renewable Electricity Support Scheme ('RESS') which aims to promote the generation of electricity from renewable sources.

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 third onshore RESS auction, 'RESS

3', was opened for public submissions on the design and implementation from the 28th of October 2022 until the 16th December 2022. The Programme for Government commits to holding RESS auctions at frequent intervals throughout the lifetime of the scheme. This will allow Ireland to take advantage of falling technology costs and avoid 'locking in' higher costs for consumers. The aim of the targeted consultation is to receive stakeholder feedback on these proposed aspects of the Terms and Conditions which may impede the efficient and cost-effective delivery of renewable electricity projects under RESS 3.

The third onshore RESS Auction Scheme, 'RESS 3' will be a major step in meeting the ambition of achieving up to 80% renewables by 2030, up to 8GW of onshore wind capacity and the updated ambition of up to 5.5GW of solar capacity under the revised Sectoral Emissions Ceilings.

The RESS ensures that we are on a pathway to meet our ambitious climate targets and lays the foundations of a thriving and cost-effective renewable electricity market. This will support the growth of the green economy, create sustainable work opportunities, and ultimately benefit the consumer as renewables become more cost effective and increase Ireland's energy security

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 Guidelines) in December 2019. The draft 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 draft Guidelines pending the Department publishing a final version of any revised guidance.

The draft 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 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 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"* and accordingly, has been developed with the provisions of the draft 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 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 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 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 Guidelines are not yet finalised and have not been adopted. The relevant Wind Energy Guidelines for the purposes of Section 28 of the Planning and Development Act 2000, as amended, remain 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 Guidelines may be finalised during the consideration period for the current Proposed Project. To this end on the basis of the details available from the draft 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 Project maintains a four times tip height set back between turbines and identified sensitive receptors and furthermore detailed community consultations have been carried out.

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 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. August 2018 saw the applicants for new connection capacity under ECP-1 published. ECP-2 was launched in June of 2020, which set policy for at least three annual batches of connection offers (ECP 2.1, ECP-2.2, and ECP-2.3). On 4th April 2023 the CRU published its Decision on ECP-2.4, confirming a fourth batch under the ECP-2 policy. The first three ECP-2 application windows (2.1 -2.3) opened for the month of September each year. The application window for the fourth annual batch (ECP-2.4) was open from 1st October - 30th November 2023.

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.

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.

A Community Consultation Report has been prepared by MKO and is included in Appendix 2-1 to this chapter. This report outlines the steps taken by the Applicant to communicate effectively with the local community in respect of the Proposed Project.

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.

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 Department of the Environment Heritage and Local Government's 'Wind Energy Development Guidelines' (2006).

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 Guidelines) under Section 28 of the Planning and Development Act, 2000. The aim of these guidelines was to assist the proper planning of wind power projects in appropriate locations around Ireland. The 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 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.

2.5 Planning History

This Section of the EIAR sets out the relevant planning history of the Proposed Wind Farm application site, and other wind energy applications within the wider area (25km from the proposed turbines). The approach has considered all valid applications made post 2014, adopting the approach that any development permitted prior to that period has either expired or has been constructed and forms part of the baseline. This range was included to take into account 10-year planning permissions and the potential for extension of duration of planning permissions.

For the purposes of reviewing and stating the relevant planning history for this project the following criteria have been adopted in relation to the various elements of the Proposed Wind Farm:

1. All planning applications which overlap or are within the planning application boundary of the Proposed Wind Farm have been identified (red line application boundary).
2. All planning applications which overlap or are within the planning application boundary of the Proposed Grid Connection have been identified (red line application boundary).
3. A buffer zone of c. 25 kilometres was established from the proposed turbines in order to identify other wind farm sites in the wider area. For the purposes of this EIAR the planning history was extended to this wide range for wind farm developments due to the potential for cumulative effects to arise with the Proposed Wind Farm from a landscape and visual perspective as identified in Chapter 14: Landscape and Visual Assessment, and from an Ornithological perspective, as identified in Chapter 7 - Birds
4. The planning history covers the period from 2014-2024, based on the assumption that any permitted development prior to that date has either expired or has been constructed and therefore forms part of the baseline.

Further details on the cumulative assessment study areas for each environmental criteria are set out in Section 2.8 of this Chapter.

2.5.1 Planning applications within the Proposed Wind Farm Application Boundary

A planning search was carried out through the national planning application database[10] and An Bord Pleanála's online planning portal in May 2024 for relevant planning applications lodged since 2014 within the planning application boundary of the Proposed Wind Farm. The planning applications within the wind farm site are outlined in Table 2-7 below. These applications comprise of small-scale permissions relating to agriculture, forestry, one off rural dwellings and updates to electrical grid infrastructure.

Table 2-7 Applications Within the Proposed Wind Farm Boundary

Planning Reference	Development Description	Decision
15/861	Extension of duration: to build a 38kv line from existing Cloon 110kv Station at Cloonascragh, Tuam to a point in the existing 38kv Station at Glenamaddy (previous planning reference no: 10/779)	Granted by GCC 07/09/2015 (Planning Permission Expired 06/09/2020)

[10] *https://housinggovie.maps.arcgis.com/apps/webappviewer/index.html?id=9cf2a09799d74d8e9316a3d3a4d3a8de*

Planning Reference	Development Description	Decision
19/1827	For the construction of a new forest road bellmouth entrance, for trucks to access forestry plantations and associated site works	Granted by GCC 09/03/2020
20/320	For the renovation of an existing derelict dwelling, the installation of a new treatment plant, secondary treatment filter and percolation area, including all associated site works.	Granted by GCC 08/03/2021
24/60230	for the development consisting of a new 38kV overhead line (OHL) from existing Glenamaddy 38kV station to existing cable ducts approximately 720 metres East of the existing Cloon 110kV station at Cloonascragh. The proposed development involves the construction of 179no. poles (up to 18m in height), 2no. end masts (up to 16.2m in height) and stringing with overhead lines, over a distance of approximately 26.8km, and all associated works including any temporary works required. The project was previously granted under pl. ref. no. 10779 and an extension of this permission was granted under pl. ref. no. 15861. A Natura Impact Statement (NIS) accompanies the application. OSI 2,500 series; 2882, 2883, 2815, 2816, 2748, 2679, 2609, 2610, 2680, 2543, 2544, 2611	Further Information Requested by GCC 26/04/2024.

2.5.2 Planning applications within the Proposed Grid Connection Application Boundary

A planning history search was also carried out for relevant applications lodged since 2014 within the planning application boundary of the Proposed Grid Connection. The applications are outlined in Table 2-8 below.

Table 2-8 Applications within the Proposed Grid Connection Boundary

Planning Reference	Development Description	Decision
15/861	to build a 38kv line from existing Cloon 110kv Station at Cloonascragh, Tuam to a point in the existing 38kv Station at Glenamaddy passing through or in the vicinity of the following townlands: Cloonascragh, Barnacurragh, Shantallow, Toghermore, Ballynakillia, Cahergal, Coolrevagh, Barbersfort, Graddoge, Killmore, Corskeagh Beg, Corskeagh More, Cloonriddia, Lisnaminaun, Lavally West, Corry Kilgarriff North, Mahanagh, Claddagh East, Garraunbaun Cloonarkan, Clonbern, Killavoher, Timadooaun, Cloonmore, Cloonacat, Parkbaun, Lettera, Hannagh More(Parkroe), Scotland (Previous Planning reference no: 10/779)	Granted by GCC 17/09/2015(Planning Permission Expired 06/09/2020)
19/1827	For the construction of a new forest road bellmouth entrance, for trucks to access forestry plantations and associated site works	Granted by GCC 09/03/2020
23/355	To upgrade the existing 220k overhead line between the existing Cashla 220kV Substation in the townland of Barrettspark, Co. Galway, & Tower 138 in the townland of Oughtagh, Co. Galway. The proposed development will consist of refurbishment works to the existing overhead Line	Further Information Requested by GCC 19/10/2023

Planning Reference	Development Description	Decision
	(approximately 49 km long & comprising of 138no. steel angle masts). The refurbishment works to towers will consist of: installation of replacement parts on the towers including insulators, shield wire, vibration dampeners, arching horns & anti-climbing guards; associated site development works, including temporary work areas, foundation refurbishment /strengthening & recapping/clearing of shear blocks; clearance of shear block bases; & ancillary works; ancillary site preparation works, site clearance & levelling at the 6no. temporary construction compounds & associated temporary works to existing tracks & new temporary access routes to provide internal access routes to each tower with all associated works required to facilitate the development. No works will be undertaken to the overhead line (conductor). The proposed development will also consist of upgrades to the Cashla 220kV substation that will consist of: the decommissioning and removal of line bay equipment within the substation boundary; construction of a new adjacent offline like for like line bay & associated bay protection cabinets within the substation boundary; & new overhead lines connection between the end mast & the new line bay. A Natura Impact Statement (NIS) will be submitted to the planning authority with the application	
24/60230	For the development consisting of a new 38kV overhead line (OHL) from existing Glenamaddy 38kV station to existing cable ducts approximately 720 metres East of the existing Cloon 110kV station at Cloonascragh. The proposed development involves the construction of 179no. poles (up to 18m in height), 2no. end masts (up to 16.2m in height) and stringing with overhead lines, over a distance of approximately 26.8km, and all associated works including any temporary works required. The project was previously granted under pl. ref. no. 10779 and an extension of this permission was granted under pl. ref. no. 15861. A Natura Impact Statement (NIS) accompanies the application. OSI 2,500 series; 2882, 2883, 2815, 2816, 2748, 2679, 2609, 2610, 2680, 2543, 2544, 2611	Further Information Requested by GCC 26/04/2024

2.5.3 Wind Energy Developments within 25km of the Site

A planning search was carried out to establish permitted, operational and proposed wind energy developments within 25km of the proposed turbines for the purposes of informing the potential cumulative effects (see section 2.8 of this Chapter for further details). The search was carried out using the relevant local authority, An Bord Pleanála and EIA planning portals in February 2024 for relevant planning applications. In total, 9 no. applications relating to wind energy were identified within 25km of the proposed turbines, 3 no. of which relate to single turbine developments and a further 5 no. of which relate to larger multiple turbine wind farm developments. These are outlined in greater detail in Table 2-9 below:

Table 2-9 Table of Wind Energy Developments within 25km of the Proposed Project

Pl. Ref.	Applicant	Wind Farm	Description	Decision	Status	Turbine No.	Approximate Distance to Nearest Turbine (km)
Single/ Domestic Turbines							
Pl. Ref: 221175	Sub. of Shared turbine Ltd. Cloonascragh Locally Owned Turbine Limited	Single turbine	For the development consisting of a wind energy development comprising of one electricity generating wind turbine, with an overall blade tip height of up to 168m, construction of c. 150m of permanent access track, 110m of temporary access track, road widening works along the existing local access road from the R327 to the proposed site access track, a crane hardstand, a 20kV substation, site electrical & fibre optic cabling & ancillary site works. The maximum output capacity of the wind farm will be c.4.8MW. This application is seeking a 10-year permission & a 35-year	Granted by Galway County Council on 20/11/2023 subject to 20 No. conditions	Granted Planning Permission	1	24km

Pl. Ref.	Applicant	Wind Farm	Description	Decision	Status	Turbine No.	Approximate Distance to Nearest Turbine (km)
			operational life from the date of commissioning of the wind farm. The planning application is accompanied by Natura Impact Statement (NIS)				
Pl Ref: **23/74**	John Flaherty	Domestic turbine	to erect 20kw domestic wind turbine and associated site works.	Granted by Galway County Council on 09/02/2024 subject to 9 No. Conditions	Granted Planning Permission	1	24km
Pl Ref: **20/1617 & 13/1139**	Sean Molloy	Domestic turbine	Amendments to the single wind turbine development, permitted under Galway County Council Ref. No. 13/1139, comprising an increase in the overall ground to wind turbine blade tip height, from 84 metres to up to 89.95 metres, and the associated wind turbine component alterations.	Granted by Galway County Council on 30/08/2021 subject to 10 No. Conditions	Granted Planning Permission	1	12.5km
Larger Wind Energy Applications							
MCC Ref. 09/663/ABP Ref. PL16.237401	PWWP Developments Limited	Cloontooa Wind Farm	Wind farm of up to 7 no. turbines and hub height of up to 100m and blade length of 45m and all associated infrastructure.	Granted permission by Mayo County Council on 27/07/2010.	Granted Planning Permission	7	23km

Pl. Ref.	Applicant	Wind Farm	Description	Decision	Status	Turbine No.	Approximate Distance to Nearest Turbine (km)
				Granted permission by An Bord Pleanála with revised conditions on 14/09/2011.			
GCC Ref. 08/2407 (EOD 14/518)	Oliver Tierney	Clonlusk Wind Farm	To construct 2 No. 2 megawatt wind turbines on 75m towers plus substation, access road and crane stand (gross floor space 31.7sqm, previous Planning Ref. No.08/2407)	Granted Permission by Galway County Council on 14/08/2014	Granted Planning Permission	2	20km
MCC Ref P13/617 / ABP Ref. PL16.244033	PWWP Developments Limited	Ballykinava/ Cuilmore Wind Farm	10 year permission for wind farm comprising 7 wind turbines, access roads, anemometry mast..	Granted Permission by Mayo on 08/10/2014 / Granted permission by An Bord Pleanála on 16/01/2017	Granted Planning Permission	7	10.7km
ABP Ref. 319307	Laurclavagh Ltd.	Laurclavagh Wind Farm	Proposed no 8 wind turbines and associated works.	Case is due to be decided by 12/09/2024	Proposed	8	23.8km

Pl. Ref.	Applicant	Wind Farm	Description	Decision	Status	Turbine No.	Approximate Distance to Nearest Turbine (km)
ABP Ref. 316466	Neoen Renewables Ireland Limited	Cooloo Wind Farm	Cooloo Wind farm consisting of 9 no. wind turbines with an estimated maximum energy capacity of c. 54MW.	Pre-Plan request Lodged on 25/04/2023	Pre-Application Stage	9	8km
ABP Ref. 317307	RWE Renewables Ireland Limited	Shancloon Wind Farm	Wind farm development of up to 13 no. wind turbines and associated works.	Pre-Plan Request Lodged on 12/06/2023	Pre-Application Stage	11	24km

2.6 Scoping and Consultations

2.6.1 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 to prescribed statutory bodies in September 2020 with follow up scoping taking place in December 2023. The scoping document provided details of the Proposed Project and set out the scope of work for the EIAR. Consultees were invited to contribute to the EIAR by suggesting baseline data, survey techniques and potential impacts that should be considered as part of the assessment process and in the preparation of the EIAR. As part of the constraints mapping process, which is detailed in Chapter 3 of this EIAR, telecommunications operators and Aviation bodies were also contacted in December 2023 in order to determine the presence of telecommunications links either traversing or in close proximity to the Proposed Project site.

2.6.2 Scoping Responses

Table 2-11 and Table 2-12 lists the responses received to the scoping document circulated. Copies of all scoping responses received as of June 2024 are included in Appendix 2-2 of this EIAR. The recommendations of the consultees have informed the scope of the assessments undertaken and the contents of the EIAR. If further responses are received, the comments of the consultees will be considered in the construction, operation and decommissioning of the Proposed Project in the event of both planning permissions being granted. Those bodies engaged with at scoping stage are set out below in Table 2-10.

Table 2-10 Scoping Responses

No.	Consultee	Date Sent	Response Received
1	AI Bridges	04/09/2020, 15/12/2023	No response received to date
2	An Taisce	15/12/2023	No response received to date
3	Arts Council	09/01/2024	No response received to date
4	Bat Conservation Ireland	15/12/2023	Response Received 15/12/2023
5	Birdwatch Ireland	04/09/2020, 15/12/2023	Response Received 24/01/2024
6	Commission for Regulation of Utilities, Water and Energy	15/12/2023	No response received to date
7	Department of Agriculture, Food and the Marine	04/09/2020, 15/12/2023	Response Received 15/09/2020, 13/11/20

No.	Consultee	Date Sent	Response Received
8	Department of Defence	04/09/2020	Response Received 07/09/2020
9	Department of Housing, Local Government and Heritage	15/12/2023	Response received 09/12/2024
10	Department of the Environment, Climate and Communications	04/09/2020, 15/12/2023	No Response received to date.
11	Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media	15/12/2023	No response received to date
12	Department of Transport	04/09/2020, 15/12/2023	Response Received 17/12/2020
13	EirGrid	08/01/2024	
14	Failte Ireland	04/09/2020, 15/12/2023	Response Received 14/09/2020
15	Forest Service	15/12/2023	No response received to date
16	Galway Airport	15/12/2023	No response received to date
17	Galway County Council - Environment Section	15/12/2023	No response received to date
18	Galway County Council - Heritage Officer	15/12/2023	No response received to date
19	Galway County Council - Planning Department	15/12/2023	No response received to date
20	Galway County Council -Roads and Transportation Unit	15/12/2023	No response received to date
21	Geological Survey of Ireland	04/09/2020, 15/12/2023	Response Received 02/10/2020
22	Gurteen/Cloonmore GWS Society Ltd	18/01/2024	No response received to date
23	Health Service Executive	15/12/2023	Response Received 09/02/2024
24	Iarnród Éireann	15/12/2023	No response received to date
25	Inland Fisheries Ireland	15/12/2023	Response Received 29th January 2024
27	Irish Peatland Conservation Council	04/09/2020, 15/12/2023	No response received to date
28	Irish Raptor Study Group	15/12/2023	No response received to date
29	Irish Red Grouse Association - Conservation Trust	15/12/2023	Response received 17/12/2024
30	Irish Wildlife Trust	15/12/2023	No response received to date

No.	Consultee	Date Sent	Response Received
31	LAWPRO	20/11/2020, 15/02/2024	Response received 20/11/2020
32	Office of Public Works	15/12/2023	No response received to date
33	Sport Ireland	15/12/2023	No response received to date
34	Sustainable Energy Authority of Ireland	15/12/2023	No response received to date
35	The Heritage Council	04/09/2020, 15/12/2023	
36	Transport Infrastructure Ireland	04/09/2020	Response Received 29/09/2020, 13/10/2020
37	Uisce Éireann	15/12/2023	Response Received 18/12/2023
38	Waterways Ireland	15/12/2023	Response Received 18/12/2023
39	Western RBD Project Office	15/12/2023	No response received to date

Table 2-11 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 2-11 Telecommunications Responses

	Consultee	Response	Potential for Interference Following Consultation Exercise
1	2RN	20th December 2023	No impact anticipated. 2rn asked that a protocol be signed between the developer and 2rn should the site go ahead. See Section 15.2.4.2.1 of the EIAR for details
3	Cellnex	No response received	N/A
4	Coimisiún na Meán	21st December 2023	N/A
7	Eir	No response received	N/A
8	Enet	20th December 2023	Potential for interference. Mitigation measures proposed to avoid any impact to the Enet links. See Section 15.2.4.2.2 of the EIAR for further details.
9	EOBO	No response received	N/A
10	ESB	No response received	N/A

	Consultee	Response	Potential for Interference Following Consultation Exercise
11	FastCom Broadband Ltd	No response received	N/A
12	Hibernian	No response received	N/A
14	Imagine	No response received	No impacts anticipated
15	Invertec	31st January 2024	No impacts anticipated
17	JFK Communications Ltd	No response received	N/A
18	JS Whizzy Internet Ltd	No response received	N/A
19	Magnet Plus	No response received	N/A
20	Tetra Communications	No response received	No impacts anticipated
21	TG4	20th December 2023 (2rn responded on behalf of TG4)	No impact anticipated. 2rn asked that a protocol be signed between the developer and 2rn should the site go ahead. See Section 15.3.4.2.1 of the EIAR for details
22	Towercom	15th December 2023	No impacts anticipated
23	Three	20th February 2024	Potential for interference. Mitigation measures proposed to avoid any impact to the Three links.
24	Viatel	N/A	N/A
25	Virgin Media	No response received	N/A
26	Vodafone	10th January 2024	No impacts anticipated
27	Western Broadband Network	No response received	N/A
28	BT Communications	No response received	N/A

Table 2-12 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 2-12 Consultee Responses and Relevant Chapters they are addressed in the EIAR

Consultee	Points Raised by Consultee	Addressed in Chapter
Bat Conservation Ireland	Response noted that Bat Conservation Ireland does not have the administrative capacity to comment on planning applications. Requested that all bat surveys are undertaken according to best practice.	**Chapter 6 Biodiversity**
Birdwatch Ireland	The Response noted: • Glenamaddy turlough is a White-fronted Goose site so it is recommended to contact the NPWS (Birds unit) for specific records. • Suggested that swan census records specifically Whooper Swan records are requested. • There are several birds known to be in the area during breeding season and that data for those species should be requested from the NPWS	**Chapter 7 Ornithology**
Department of Agriculture, Food, and the Marine	The Response noted: • If the proposed development will involve the felling or removal of any trees, the developer must obtain a felling licence from this department before trees are felled or removed. A Felling licence application form can be obtained from Felling Section, Department of Agriculture, Food and the Marine, Johnstown Castle Estate, Co. Wexford. • Developer should take note of the contents of Felling and Reforestation Policy. • Guidance on the assessment, publication and decision of application. • Additional requirements for planning permission.	**Chapter 4 Description** **Chapter 6 Biodiversity**
Department of Housing, Local Government and Heritage	The Response provided general nature Conservation observations/recommendations to be considered as follows: • Advised to consult the European Commission's (2017) 'Environmental Impact Assessment: Guidance on the preparation of the Environmental Impact Assessment Report (Directive 2011/92/EU as amended by 2014/52/EU)'. Any surveys and assessments should be based on a full details of the overall project, noting all lands that will be required. • Advised hat in order to assess impacts on biodiversity, fauna, flora and habitats an ecological survey should be carried out of the proposed development site including the route of any access roads, pipelines or cables, connections to the grid etc. to survey the habitats and species present.	**Chapter 2 Background** **Chapter 4 Description** **Chapter 6 Biodiversity** **Chapter 7 Ornithology** **Chapter 8 Land, Soils, Geology**

Consultee	Points Raised by Consultee	Addressed in Chapter
	• It should be remembered that a key element of Environmental Impact Assessment (EIA) is the avoidance or reduction of negative effects on the environment. EIA is an iterative process and the information gathered through assessments or surveys should be used to guide the planning and design of the wind farm so that sensitive ecological or hydrological areas are avoided, and negative impacts are minimised insofar as is possible. • Account should be taken of the new National Biodiversity Action Plan and the EIAR should outline how this project would avoid a net loss of biodiversity and include relevant mitigation and or compensatory measures where necessary. • he EIAR should include sufficient project details so that the full nature and extent of the likely significant effects are clear and assessed fully. • Highlighted other sources of habitat and species information beyond those already identified to be considered. • Surveys for all species should cover bird usage and facilitate assessment of potential collision risk, habitat loss, barrier effect and displacement for these species and should be based around the daily and seasonal activity patterns of the species being surveyed. • Bat roosts may be present in trees, buildings and bridges. Bat species are protected under the Wildlife Act, 1976 to 2018, and are subject to a regime of strict protection pursuant to the requirements of the Habitats Directive (92/43/EEC) as transposed in Irish law in Regulation 51 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). Therefore, damage/disturbance to any such roosts must be avoided in the first instance. • There is potential for the occurrence of Marsh Fritillary within the zone of impact of the proposed development. In this regard surveys for Marsh Fritillary in accordance with best practice (adult and larval webs surveys) at the appropriate times of the year are recommended. • The EIAR should include a detailed assessment of the hydrological impacts on wetlands from the proposed development. • Flood plains, if present, should be identified in the EIAR and left undeveloped to allow for the protection of these valuable habitats and provide areas for flood water retention. • Hedgerows and scrub should be maintained, as they form wildlife corridors and provide areas for birds to nest in.	**Chapter 9 Hydrology and Hydrogeology** **Chapter 17 Interaction of the foregoing** **Appendix 4-5 Construction and Environmental Management Plan**

Consultee	Points Raised by Consultee	Addressed in Chapter
	• The EIAR should also address the issue of invasive alien plant and animal species such as Rhododendron ponticum and Japanese Knotweed, and detail the methods required to ensure they are not accidentally introduced or spread during survey and or construction. • Complete project details including Construction Management Plans (CMPs) need to be provided in order to allow an adequate EIAR and appropriate assessment to be undertaken. • The Department recommends a detailed hydrological assessment is carried out in terms of the potential impacts arising from the proposed development on Natura 2000, notably Lough Corrib SAC (Site Code: 000297) which has direct hydrological links as well as other Natura sites, Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHAs) within the zone of influence. • Cumulative impact from any wind farms in the area needs to be fully and comprehensively assessed and the data from surrounding sites needs to be considered in the assessment of impacts. • This Department recognises the importance of pre and post construction monitoring, such as recommended in Drewitt et al. (2006), and Bat Conservation Ireland (2012). The applicant should not use any proposed post construction monitoring as mitigation to supplement inadequate information in the assessment. • Where there are impacts on protected species and their habitats, resting or breeding places, licenses may be required under the Wildlife Act 1976-2018 or derogations under the EC (Birds and Natural Habitats) Regulations 2011, as amended.	
Fáilte Ireland	Fáilte Ireland responded with a copy of their non-statutory supplementary Guidelines for the Treatment of Tourism in an EIA. This document outlined a number of EIAR Chapters which may have effects on tourism receptors.	**Chapter 5 Population and Human Health** **Chapter 14 Landscape**
Geological Survey of Ireland	GSI provided a document outlining potential risks and attached the relevant datasets which need to be examined. The response noted: **Geoheritage:**	**Chapter 8 Land, Soils and Geology** **Chapter 9 Hydrology and Hydrogeology**

Consultee	Points Raised by Consultee	Addressed in Chapter
	• GSI records show that there are County Geological Sites close to the Proposed EIAR site boundary of the proposed development. **Gortgarrow Spring** • Under IGH themes: IGH1 Karst, IGH16 Hydrogeology. This site comprises the water supply compound around a large karstic spring. A large spring was known historically at this locality at Gortgarrow, which has then been used as a water supply source for the last forty years. Four other relatively large springs also occur in the vicinity of the site. **Park Esker** • Under IGH themes IGH7 Quaternary. The Park Esker includes a number of high, sinuous ridge segments, which all form part of the same, small esker system. **Levally Lough** • Under IGH themes IGH1 Karst, IGH7 Quaternary. The site comprises a lake which is actually a turlough feature, but which empties only every few years, and not on an annual basis. **Derrynagran Bog and Esker** • Under IGH theme: IGH7 Quaternary, IGH16 Hydrogeology. The response states that there are no envisaged impacts on the integrity of the CGSs by the proposed development and that any proposed activities associated with the wind farm development do not impact on the CGSs. **Groundwater:**	

Consultee	Points Raised by Consultee	Addressed in Chapter
	• The Groundwater Karst viewer indicates a karst spring on the margins of the site boundary in the townland of Gortagarraun: Gurteen Cloonmore Spring Source. • The Groundwater Data Viewer indicates an aquifer classed as a 'Regionally important aquifer - karstified (conduit)' underlies the proposed development site. The groundwater vulnerability map indicates the range of groundwater vulnerabilities within the area covered is variable. We would therefore recommend the use if 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. • The document names the groundwater drinking water abstractions that are present in the area. • Key to groundwater protection in general, and protection of specific drinking water supplies, is preventing ingress of runoff to the aquifer. Design and drainage will need to be cognisant of the public water scheme and the interactions between surface water and groundwater as well as run off. Appropriate design should be undertaken by qualified and competent persons to include mitigation measures as necessary, such as SUDS or other drainage mitigation measures. • Any excavations/cuttings required for realignment should ensure that groundwater flow within the zones of contribution to the groundwater abstraction points is not disputed, resulting in diminished yields. **Geotechnical Database Resources:** • GSI encourage use of their Geotechnical Map Viewer in the course of the EIAR. **Natural Resources:** • GSI would recommend the use of Aggregate Potential Mapping viewer in order to identify areas of high to very high source aggregate potential within the area.	
Health Service Executive	The Response noted: • **Public Consultation** – It is recommended that early and meaningful public consultation with the local community is undertaken. All parties affected by the proposed development must be fully informed of	**Chapter 2 Background** **Chapter 3 Reasonable Alternatives**

Consultee	Points Raised by Consultee	Addressed in Chapter
	what the proposal entails. The EIAR should demonstrate public consultations and how these have influenced the decision-making process in the EIA. • **Decommissioning** - EIAR should detail the eventual fate of the wind turbines and associated material. It should assess the future use of the development site at the end of the planning permission period. • **Siting of Turbines** – The proposed wind turbines must be clearly indicated in the EIAR. • **Assessment of Consideration of Alternatives** – The EIAR should consider an assessment of alternatives. It is recommended that alternatives to onshore wind farms should be assessed within the EIAR. • **Noise and Vibration** - Potential for noise and vibration at all noise sensitive locations must be identified in the EIAR. EIAR must also consider appropriateness of all mitigation measures. Baseline noise monitoring survey to be carried out. Predicted noise levels from construction, operation and decommissioning to be carried out also. The EIAR should have consideration to the 2019 Guidelines. • **Shadow Flicker** – It is recommended that a shadow flicker assessment to be carried out. No dwelling should be exposed to shadow flicker. • **Air Quality** - A CEMP should be prepared which details dust mitigation measures, such as sweeping of hard road surfaces, provision of a water bowser onsite, regular spraying of haul roads, wheel washing facilities at exit, speed restrictions onsite, covers to all delivery trucks, inspect and clean public roads if necessary, material stockpiling provided with adequate protection from the wind, dust monitoring at the site boundary, truck inspection and maintenance, details of road maintenance agreement between the operator and the local roads authority. • **Surface and Groundwater quality** - All drinking water sources must be identified. Public and group water scheme sources and supplied should be identified in addition to any private wells supplying potable water to houses in the vicinity. EHS recommends that a walkover survey is undertaken in addition to desktop Geological Survey of Ireland data in order to identify private and public wells. Details of bedrock, overburden, vulnerability, groundwater flows, aquifers and catchment areas should be considered when assessing potential impact and any proposed mitigation measures. Impacts as a result of the construction of the underground cables should also be identified and addressed. • **Geotechnical and Peat Stability Assessment** - a detailed assessment of the current ground stability and relevant mitigation measures should be detailed in the EIAR. Assessment should include for construction impacts on future ground stability. This should take into account the potential for soil erosion. Information should be included on the make and model of the turbines and on construction methodologies. The EHS	**Chapter 4 Description** **Chapter 5 Population and Human Health** **Chapter 8 Land, Soils, Geology** **Chapter 9 Hydrology and Hydrogeology** **Chapter 10 Air** **Chapter 12 Noise and Vibration** **Chapter 17 Interaction** **Appendix 4-5 Construction and Environmental Management Plan** **Appendix 4-6 Decommissioning Plan**

Consultee	Points Raised by Consultee	Addressed in Chapter
	recommends a detailed Peat/Stability/Geotechnical Assessment of the proposed development be undertaken to assess the suitability of the soil. • **Ancillary Facilities** - EIAR to include details of site office, construction compound fuel storage depot etc. • **Cumulative Impacts** - all existing or proposed wind farm developments in the vicinity should be clearly identified and assessed in the EIAR	
Inland Fisheries Ireland	The Response noted: • The proposed development site is located within the Lough Corrib catchment, the site contains watercourses which form part of the Clare River, Sinking River and Grange River. • All watercourses that will receive drainage from the construction sites of the turbines or access roads must be assessed in terms of aquatic biodiversity. • The aquatic habitat and physical nature of any watercourse affected by the development must be fully described in detail. • Electrofishing surveys will be required for all waters. • The soils, their structure and types around all the turbines, associated access roads and site development needs to be established. • IFI strongly recommends that specialist personnel are employed to assess soil strength and suitability of the ground at each site and along any proposed access road. • Particular attention should be paid to the hydrology of any site where excavations including those for road construction are being undertaken. • Attention should be paid to drainage during both the construction and operation phase. • There are serious concerns about the construction of roads as these will tend to provide preferential flow paths for surface waters. Considerable attention to detail must be provided in relation to the interception of surface water flows. • Serious consideration must be given to the disposal of all waste materials such that they will not give rise to any risk. • Details in relation to site offices and the services necessary for the site offices should form part of the EIA. • The use of sedimentary rocks, such as shale, in road construction should be avoided. • In relation to watercourse crossings it is advised that IFI will require to be consulted well in advance.	**Chapter 4 Description** **Chapter 6 Biodiversity** **Chapter 9 Hydrology and Hydrogeology** **Construction and Environmental Management Plan**

Consultee	Points Raised by Consultee	Addressed in Chapter
	• Any instream works or other works which may impact directly on a watercourse should only be carried out during the open season. • The EIS should indicate proposals to monitor the impact on all watercourses within the development. • It is recommended that discussion take place with the Environment Section of the relevant County Council with a view of obtaining a licence to discharge trade effluent from the "building site" to waters. • Should works be approved a detailed method statement addressing the issues outlined above, including all mitigation measures, precautions and environmental incident procedures must be forwarded to Inland Fisheries Ireland before works commence.	
Transport Infrastructure Ireland	The Response noted: • Consultation should be had with the relevant local authority/national roads design office with regards to the locations of existing and future national road schemes. • TII would be specifically concerned as to potential significant impacts the development might have on the national road network; • The developer should assess visual impacts from existing national roads. • The developer should have regard to any EIARs/EISs, and all conditions or modifications imposed by ABP regarding road schemes in the area. also have regard to cumulative impacts. • Have regard to TII publications; • Have regard to TII's Environmental Assessment and Construction Guidelines, including the 'Guidelines for the Treatment of Air Quality during the planning and construction of national road schemes' • The EIAR should consider the 'Environmental Noise Regulations 2006'. developer may need to incorporate noise barriers. • It would be important that a traffic and transport assessment be carried out in accordance with relevant guidelines including TII's 'Traffic and Transport Assessment Guidelines • The designers are asked to consult TII's publications to determine whether a road safety audit is required. • The EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network. • TII recommends the developer clearly identify the haul routes proposed. • It is recommended that a full assessment of all route alternatives to grid connection takes place, including alternatives to public road, where appropriate.	**Chapter 1 Introduction** **Chapter 10 Air** **Chapter 12 Noise and Vibration** **Chapter 14 Landscape** **Chapter 15 Material Assets**

Consultee	Points Raised by Consultee	Addressed in Chapter
Uisce Eireann's	The Response noted that Uisce Éireann does not have the capacity to advise on the scoping of individual projects. However, in general the following aspects of Water Services should be considered in the scope of an EIA where relevant: • The applicant shall provide details of measures to be taken to ensure that there will be no negative impacts on any water source(s) the applicant shall provide details of measures to be taken to ensure that there will be no negative impact to Uisce Eireann's Drinking Water Source(s) during construction and operational phase. • Where the development proposes the backfilling of materials, the applicant is required to include a waste sampling strategy to ensure the material is inert. • 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. • 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 Eireann collection network. • Any physical impact on Uisce Eireann assets • 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 Eireann discharge outfalls should be identified within the report.	**Construction and Environmental Management Plan** **Chapter 4 Description** **Chapter 9 Hydrology and Hydrogeology**

Consultee	Points Raised by Consultee	Addressed in Chapter
	• Any potential impact on the contributing catchment of water sources either in terms of water abstraction for the potential of the development to influence/ present a risk to the quality of the water abstracted by Uisce Eireann for public supply should be identified within the report. • Where s development proposes to connect to an Uisce Eireann 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 Eireann drinking water sources.	
LAWPRO	The Response noted: • The Local Authority Waters Programme are a shared service working with Local Authorities and State Agencies to implement the EU Water Framework Directive via the River Basin Management Plan for Ireland 2018 - 2021. We work along side 31 local authorities nationally, however we have no statutory role in consultations of this nature. • They work alongside 31 local authorities nationally, however they have no statutory role in consultations of this nature. • Working with the Castlegar Priority Area for Action which lies just east of the development location. • Recommended that the aquatic ecologists working on the EIA, consult with www.catchments.ie for the latest water quality status and risk information. • Noted that a Draft River Basin Management Plan for the 3rd cycle of implementation of the WFD in Ireland, covering 2022 to 2027 is due to be published by the end of this year, or potentially in Q1 of 2021.	**Construction and Environmental Management Plan** **Chapter 4 Description** **Chapter 9 Hydrology and Hydrogeology**

2.7 Other Consultations

2.7.1 Pre-Planning Meetings

2.7.1.1 Galway County Council

First Meeting

The prospective applicant and members of the design team met with representatives from Galway County Council (GCC) in relation to the Proposed Project prior to the submission of this planning application.

The first meeting took place in accordance with Section 247 of the Planning and Development Act 2000 (as amended) (the Act) on the 19th November 2020, via MS Teams, and included representatives from the Council's Planning, Roads, Environment, Municipal District and Heritage sections. The team gave a brief PowerPoint presentation as in introduction to the site and development proposals, including a summary of the Strategic Infrastructure Development (SID) thresholds and criteria noting the application would be made to An Bord Pleanála as SID.

Those in attendance were:

- Caroline Hannon (GCC)
- Alan O'Connell (GCC)
- Catherine Crawford (GCC)
- Fiona Holland (GCC)
- Jack Houlihan (GCC)
- Ann Dolan ((GCC)
- Christina Ryan (GCC)
- Owen Cahill (MKO)
- Jimmy Green (MKO)
- Paul Sweeney (MKO)

Matters discussed included:

- Introduction
- Strategic Infrastructure Development Consultations
- Site Location
- Site Selection
- Policy Context
- Wind Farm Design Process and Emergence of Optimal Layout
- Stakeholder Engagement and Public Consultation
- Environmental Impact Assessment Report

The Roads Department of GCC requested a comprehensive assessment of the turbine delivery route, including swept path analysis and auto-tracks analysis. It was also outlined that road realignment works were proposed by GCC and that any autotracks should adopt this where required. Additionally, GCC requested liaison with the local engineer for the Tuam area to ensure proposed works align with any network changes required for turbine delivery.

Please refer to Section 15.1.1.4 of the EIAR for further details.

Second Meeting

A second meeting was held between members of the project team and the applicant with representatives from GCC Department via MS Teams on the 11th December 2023. The project team gave a further overview of the Proposed Project and the design updates to the wind turbine locations and grid route connection proposals, in the form of a PowerPoint presentation. The purpose of the meeting focused on discussions of a second Grid Connection which comprises the construction of a Proposed 220kV Grid Connection including a substation and associated infrastructure on lands at Clonberne and Ballinphuil Co. Galway.

Those in attendance were:

- Alan O'Connell – Senior Planner (Galway County Council)
- Liam Hanrahan – Director of Planning (Galway County Council)
- Patrick O'Sullivan – Executive Planner (Galway County Council)
- John Walsh – Cregmore Ltd (Applicant)
- Owen Cahill – MKO Environmental
- Jonny Fearon – MKO Environmental
- Alan Clancy – MKO Planning
- Jade Power – MKO Planning

Matters discussed included:

- Introduction & The Applicant
- Background
- Project Overview
- Planning Policy Context
- Environmental Assessment
- Public Consultation
- Proposed Project Timeline

2.7.1.2 An Bord Pleanála

2.7.1.2.1 *Section 37B Consultation*

The prospective Applicant engaged with An Bord Pleanála (the Board) under the provisions Section 37B of the Planning and Development Act 2000 (as amended), as to whether the Proposed Project would meet the thresholds of the Seventh Schedule of the Planning and Development Act, 2000, as amended. The prospective applicant opened consultations with the Board in March 2020 with a Proposed Project of 11 no. wind turbines at the Clonberne site.

A SID meeting under the provisions of Section 37B (Case Reference ABP-307058-20) was held with the Board on the 22nd June 2020. Those in attendance were:

- Ciara Kellett, Assistant Director of Planning (Chair), An Bord Pleanála
- Patricia Calleary, Senior Planning Inspector, An Bord Pleanála
- Rob MacGiollarath, Executive Officer, An Bord Pleanála
- Jimmy Green, MKO
- Owen Cahill, MKO
- Paul Sweeney, MKO

The design team gave an overview of the Proposed Wind Farm in the form of a PowerPoint presentation. The presentation included:

- Introduction
- Site Location
- Site Selection
- Policy Context
- Wind Farm Design Process and Emergence of Optimal Layout
- Stakeholder Engagement and Public Consultation
- Environmental Impact Assessment Report
- Strategic Infrastructure Development Criteria

Pre-Application Close out Letter

On the 14th October 2020 MKO on behalf of the prospective Applicant sought to close the consultation process with An Bord Pleanála. On the 9th November 2020 An Bord Pleanála the Board wrote to the prospective Applicant and confirmed that the consultation was closed and that the Proposed Wind Farm was considered to be strategic infrastructure within the meaning of Section 37A of the Act and therefore the planning application should be made directly to An Bord Pleanála.

2.7.1.2.2 *Section 182E Consultation*

First Meeting

The prospective Applicant also engaged with An Bord Pleanála under the provisions of Section 182E of the Planning and Development Act 2000 (as amended), as to whether the Grid Connection element of the Proposed Project would be considered SID.

A SID meeting under the provisions of Section 182E Case Reference ABP- 314729-22) was held with the Board on the 13th December 2022. Those in attendance were:

- Ciara Kellett, Assistant Director of Planning (Chair), An Bord Pleanála
- Paul Caprani, Senior Planning Inspector, An Bord Pleanála
- Niamh Thornton, Executive Officer, An Bord Pleanála
- Owen Cahill, MKO
- John Willoughby, MKO
- Ronan Dunne, MKO

The design team gave an overview of the Proposed Grid Connection in the form of a PowerPoint presentation. The presentation included:

- Introductions
- Pre-planning consultations to date
- Summary details of project
- Proposed Project
- Policy Context
- Design and environmental assessment process
- S182 criteria
- Proposed project timeline
- Feedback and discussion

On the 8th June 2023, MKO on behalf of the prospective Applicant sought a second meeting with the Board in relation to the Grid Connection. The purpose of the meeting was to discuss the second Grid Connection option which was being considered and it was noted to the Board that the intention was to request planning permission for both the 110kV and 220kV Substations and Grid Connections options

and to determine which option to construct based on the project's requirements and grid connection offers received from Eirgrid in the event of a grant of planning permission.

Second Meeting

A second SID meeting under the provisions of Section 182E was held with the Board on the 11th July 2023.The purpose of the meeting was to discuss the second Grid Connection option which was being considered and it was noted to the Board that the intention was to request planning permission for both the 110kV and 220kV Substations and Grid Connections options and to determine which option to construct based on the project's requirements and grid connection offers received from Eirgrid in the event of a grant of planning permission.

Those in attendance were:

- Paul Caprani, Senior Planning Inspector, An Bord Pleanála
- Ashling Doherty, An Bord Pleanála
- Michael Watson, MKO
- Sanghamitra Dutta, MKO
- Alan Clancy, MKO
- Jade Power MKO
- John Walsh, The Applicant
- Johnny Mullins, The Applicant

The design team gave an overview of the updated Grid Connection options for the Proposed Project in the form of a PowerPoint presentation. The presentation described both proposed grid connections (110kv connection to substation, or overhead 220kv connection) and it was noted that only one option for grid connection will be applied for planning permission dependent on EirGrids capacity for the connection.

Pre-Application Close out Letter

On the 2nd January 2024, the Board wrote to the prospective Applicant and confirmed that the consultation was closed and that the Grid Connection was considered to be strategic infrastructure within the meaning of Section 182E of the Act, and therefore the planning application should be made directly to An Bord Pleanála.

2.7.2 Community Consultation

The applicant has engaged with the local community with regards the Proposed Project. Appendix 2-1 of this EIAR contains a full and detailed community report. In summary, the report was prepared to record the consultation carried out with the local community in respect of the Proposed Project. The applicant has carried out consultation in relation to the Proposed Project with local residents and interested parties in the wider community. 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.

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, is its Community Benefit Fund. 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 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 Guidelines have 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".*

The report in Appendix 2-1 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 benefit the surrounding communities, through the community benefit fund for residents and community groups, employment during the construction and operation of the Proposed Project, payments to involved landowners and through the annual rates payable to the local authority.

2.8 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 the project 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 the 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 EIAR 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.

2.8.1 Methodology for the Cumulative Assessment of Projects

The potential cumulative impact of the Proposed Project and combined with the potential impact of other projects and/or plans has been carried out with the purpose of identifying what influence the Proposed Project will have on the environment when considered collectively with existing, approved and proposed plans and projects and land-uses in the defined cumulative assessment study areas as set out in Table 2-13 below. The long list of planning applications which have been considered as part of the cumulative assessment are included in Appendix 2-3 of this EIAR.

The cumulative impact assessment of projects has three principle aims:

1) To establish the range and nature of existing, approved and proposed projects within the cumulative impact study area of the Proposed Project.
2) To summarise the relevant projects which have a potential to create cumulative impacts.
3) 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.

Plans have also been considered and assessed for potential cumulative impacts throughout the EIAR where necessary (e.g. the Galway County Development Plan 2022-2028, the Northern and Western Regional Spatial and Economic Strategy, the National Planning Framework, the National Development Plan, National Biodiversity Action Plan, etc). Where specific plans have been assessed for potential cumulative effects, these are identified in the relevant chapters of this EIAR.

Assessment material for this cumulative impact assessment was compiled on the relevant projects within the vicinity of the Proposed Project. The material was gathered through a search of relevant online Planning Registers and EIA portal, 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.

2.8.2 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 2-13. 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 2-13 Cumulative Study Area

Individual Topic	Maximum Extent	Justification
Population & Human Health (including shadow flicker)	**Proposed Wind Farm:** Shadow Flicker Study Area (10xRD buffer from proposed turbines) **Proposed Grid Connection:** Grid Connection Study Area for Population (100m from underground electrical cabling route)	The Study Area for Population is identified in Chapter 5 as the District Electoral Divisions where the Proposed Project Site is located. The study area for the shadow flicker assessment is ten times rotor diameter from each turbine as set out in the Wind Energy Development Guidelines for Planning Authorities', DoEHLG, 2006. All residential properties located within

Individual Topic	Maximum Extent	Justification
	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.	ten rotor diameters which is assumed to be 1.62 kilometres have been included in the assessment. For the Grid Connection, the Study Area for Population is identified as 100m from the proposed underground electrical cabling route. Both the Proposed Wind Farm site and Proposed Grid Connection Study Areas for Population identified are considered for cumulative effects on Population
Biodiversity – Flora & Fauna	**Proposed Wind Farm** 1km from the Proposed Wind Farm site **Proposed Grid Connection** 200m from the Proposed Grid Connection underground electrical cabling route Consideration for the Biodiversity cumulative extent is also given to the Bats, 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 1km for cumulative assessment for the Wind Farm site and 200m from Grid Connection underground electrical cabling route. The geographical boundary for aquatic ecological aspects is the Corrib catchment due to potential connectivity downstream with aquatic receptors.
Biodiversity - Birds	**Proposed Wind Farm and Grid Connection** 25km from the Proposed Wind Farm turbines for large infrastructural development, 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

Individual Topic	Maximum Extent	Justification
		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.
Biodiversity - Bats	**Proposed Wind Farm and Grid Connection** 10km from the EIAR Site Boundary	A 10km buffer of the EIAR Site Boundary is used as is recommended for the desktop study and cumulative assessment by NatureScot Guidelines 2021 (Section 4).
Land, Soils and Geology	**Proposed Wind Farm and Grid Connection** EIAR Site Boundary	The geological cumulative study area will be contained within the EIAR Study Area Boundary due to the localised nature of the proposed construction works. There is no potential for significant cumulative effects with regard to soils and geology outside of the EIAR Study Area boundary.
Hydrology & Hydrogeology	**Proposed Wind Farm and Grid Connection** Clare River Catchment area for assessing other wind farms and large infrastructure. The Levally Stream_010, Sinking_020 and Clare(Galway)_020 sub-basins for small projects (i.e. agricultural, forestry and smaller planning applications	The cumulative Water Study area is delineated by the catchment of the Clare River which has an area of ~1,000km^2. Downstream of the Clare River catchment (i.e. Lough Corrib itself) no cumulative hydrological effects are likely due to the large upstream catchment area of Lough Corrib (i.e. ~3,100km^2) and the very high dilution effects afforded by such a large regional catchment, subsequent large surface water flows and the natural attenuation afforded by Lough Corrib itself. Two cumulative scoping in areas have been used in this assessment: • The cumulative study area for assessing other wind farms and large infrastructure is the Clare River catchment; • The cumulative study area for assessing small projects (i.e. agricultural, forestry and smaller planning applications) include the Levally Stream_010, Sinking_020 and Clare(Galway)_020 sub-basins.

Individual Topic	Maximum Extent	Justification
		A hydrological cumulative impact assessment is carried out at the Clare catchment scale for other large projects such as other wind farm developments and large-scale infrastructure developments. Other smaller developments have been excluded at this regional scale as cumulative effects are likely to be less than perceptible at this (regional) scale.
Dust	**Proposed Wind Farm and Grid Connection** 0.5km from the EIAR Site Boundary	Dust soiling effects can occur for a distance of 250m from works areas, but the majority of deposition occurs within the first 50m (IAQM, 2024). 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 0.5km from the EIAR Site Boundary
Air Quality	**Proposed Wind Farm and Grid Connection** 1.63km from the EIAR Site Boundary	In line with the TII Publication Air Quality Assessment of Proposed National Roads – Standard PE-ENV-01107, December 2022, a geographical boundary of 1.63km from the EIAR Site Boundary was used for cumulative air quality assessment.
Climate	**Proposed Wind Farm and Grid Connection** 1.63km from the EIAR Site Boundary	A geographical boundary of 1.63km from the EIAR Site Boundary was used for cumulative air quality assessment.
Noise and Vibration	**Proposed Wind Farm** The list of wind farms which were initially considered in cumulative	The geographical boundary for the cumulative noise assessment is the area within which noise levels from the proposed, consented and existing wind

Individual Topic	Maximum Extent	Justification
	assessment extended to 10 km of the Proposed Wind Farm turbines. **Proposed Grid Connection** 200m from Proposed Grid Connection underground electrical cabling route.	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 8km from the proposed turbines, there is no potential for cumulative noise effects. Due to the narrow nature of the underground electrical cabling route trench (~0.6m wide), a 200m buffer zone is an appropriate scale when considering potential cumulative noise effects.
Cultural Heritage	**Proposed Wind Farm and Grid Connection** 20km buffer from the EIAR Site Boundary	The cumulative impact on cultural heritage will be assessed in accordance with the landscape and visual impact of the Proposed Project. Its cumulative assessment boundary is therefore linked with that of the Landscape and Visual Assessment 20km radius.
Landscape & Visual	**Proposed Wind Farm and Grid Connection** 20km buffer from the EIAR Site Boundary	For blade tips in excess of 100m, a Zone of Theoretical Visibility radius of 20km would be adequate (this is twice conventional thresholds and reflects greater visibility of higher structures), as noted in Appendix 3 of the Wind Energy Development Guidelines 2006.
Material Assets: Traffic & Transport	**Proposed Wind Farm and Grid Connection** 20 kilometres from the EIAR Site Boundary for wind farm developments. 10km from the EIAR Site Boundary for all other developments	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 from the EIAR Site Boundary for wind farm developments and 10km buffer

Individual Topic	Maximum Extent	Justification
		from the EIAR Site Boundary for all other developments is deemed appropriate to capture other plans and projects with the potential for cumulative effects with the Proposed Project. Please refer to Chapter 15 Material Assets for further details on the cumulative assessment methodology.

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 all applications considered by each of the different disciplines in their cumulative impact assessment is included in Appendix 2-3.

2.8.3 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 and/or plans and land uses within the cumulative study area and within the vicinity of the Proposed Project. Assessment material for this cumulative impact assessment was compiled on the relevant project and/or plans within the defined cumulative assessment study areas. 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. These include ongoing agricultural practices. 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 all applications considered by each of the different disciplines in their cumulative impact assessment is included in Appendix 2-3.

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.