2. BACKGROUND TO THE PROPOSED DEVELOPMENT

This section of the EIAR presents policy information on Energy and Climate Change policy and targets, the strategic, regional, and local planning context for the Proposed Development, scoping and consultation, and the cumulative impact assessment process.

2.1 Introduction

This section of the EIAR presents the policies and targets which have been put in place at the various levels of Government both national and international in relation to renewable energy and climate change. The details below set out the need for the Proposed Development to aid Ireland in meeting its national targets and European commitments in relation to climate change and decarbonisation.

The Proposed Development comprises the provision of a wind farm which will generate renewable energy and provide it for use onto the national grid. The need to decarbonise the economy and reduce emissions has always been imperative, however in recent years the urgency involved has become clearer to all stakeholders. The Climate Action Plan (2023) has clearly identified the need for and urgency of change, it states:

> *"Inaction is not an option. We must change for the better. We need to move at scale and at speed to ensure our country, people and planet have the best possible chance, not only to survive, but to thrive. Climate Action Plan 2023 sets out our ongoing, urgent response to the climate crisis."*

The Climate Action Plan 2023 (p. 29) outlines recent trends in Ireland's greenhouse gas (GHG) emissions. The analysis shows that emissions have undergone a considerable shift in the three decades since 1990 (see Figure 2.1 below). According to the Environmental Protection Agency's inventory data, the rate of emissions reduction was modest up to 2008, with efforts to decarbonise constrained by strong economic activity. While an economic downturn in 2008 saw GHG emissions drop, they began to trend upwards again from 2011 as the economy picked up, with an overall peak in 2018.

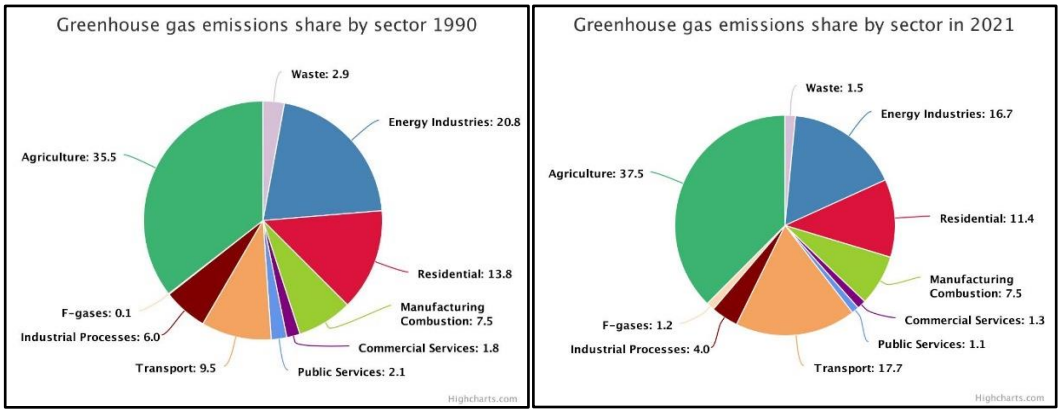


Figure 2-1: comparison of GHG emissions in Ireland 1990 and 2021 - Latest emissions data | Environmental Protection Agency (epa.ie)

Agriculture is our largest source of emissions, representing 33.3% of total national GHG emissions in 2021, based on provisional estimates. The transport and energy (primarily power generation) sectors represented 15.7% and 14.4% of emissions respectively in 2021. The transport sector has been the fastest growing source of GHG emissions over the past three decades, showing a 112% increase between 1990 and 2021. These three key sectors – agriculture, transport and energy – consistently produce the largest share of Ireland's emissions.

During the COVID-19 restrictions, GHG emissions in Ireland decreased by 3.6% in 2020. However, 2021 saw GHG emissions rise again by 4.7% as some sectors recovered. This increase in total emissions relative to 2020 was driven by increased use of coal and oil for electricity generation, as well as increases in both the Agriculture and Transport sectors.

Table 2-1: CO2 emission changes 2020 – 2021 Latest emissions data | Environmental Protection Agency (epa.ie)

Mt CO_2 eq	2020	2021	% Change
Agriculture	22.43	23.10	3.0%
Transport	10.29	10.91	6.1%
Energy Industries	8.74	10.27	17.6%
Residential	7.40	7.04	-4.9%
Manufacturing Combustion	4.55	4.59	0.9%
Industrial Processes	2.11	2.46	16.8%
F-Gases	0.74	0.74	-0.2%
Commercial Services	0.84	0.82	-3.0%
Public Services	0.69	0.66	-3.8%
Waste	0.98	0.94	-4.5%
LULUCF	6.94	7.77	11.9%
Total excluding LULUCF	**58.77**	**61.53**	**4.7%**
Total including LULUCF	**65.71**	**69.30**	**5.5%**

The primary drivers behind the Proposed Development is the need to provide additional renewable energy to reduce the use of fossil fuels within the electricity generating sector, to enhance the security of energy supply and to contribute to the broader climate action targets. 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.

This review of relevant policy contained in this Section of the EIAR concludes that the proposed Ballivor Wind Farm is consistent and supported by the overarching planning and policy drivers with regard to facilitating the move away from dependency on fossil fuels and the promotion of proper planning and sustainable development.

2.1.1 Climate Change Policy and Targets

The Intergovernmental Panel on Climate Change (IPCC) reports have consistently identified the need to reduce greenhouse gas (GHG) emissions and stressed the importance of reducing global warming. The emphasis of international reporting has altered over the last 30-years from being of a warning nature to the current, almost universally accepted understanding, that there is a climate change emergency

occurring both within Ireland and at a broader global scale. The IPCC Sixth Assessment Report[1] published in 2021 provides a stark assessment of global climate change and presents evidence that climate change will progressively effect 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[2], 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;

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:

[1] *Climate Change 2021 'The Physical Science Basis' (Intergovernmental Panel on Climate Change, August 2021)*
[2] *Climate Status Report for Ireland 2020 (Environmental Protection Agency, Marine Institute, Met Éireann, August 2021)*

- 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 Development will contribute to the decarbonisation of the energy sector and reduce harmful emissions. In this regard, it is consistent with national and international climate change policy and targets.

2.1.2 International Policy

United Nations Framework Convention on Climate Change

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

Kyoto Protocol

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

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

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

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

COP21 Paris Agreement

COP21 was the 21st session of the Conference of the Parties (COP) to the UNFCCC. 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 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 1.5ºC, stating that (underlined for emphasis),

> *"Humanity has emitted 2,560 billion equivalent tons of CO_2 since 1750, and we only have a budget of 500 more if we want to limit warming to 1.5°C.*
>
> *By following a trajectory of very low GHG emissions (SSP1-1.9), the threshold of 1.5°C will be reached in the short term, between 2021 and 2040, before being very slightly exceeded (1.6°C anticipated over the period 2041-2060) then respected in the long term (1.4°C anticipated over the period 2081-2100).*
>
> *Everything is not lost, but we must pursue the Paris Agreement's most ambitious goal of limiting warming to 1.5°C."*

An article published by the IPCC on the 6th October 2018 titled '*Global Warming of 1.5ºC*', 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 was 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 provided an update on the impact of climate change if emissions were 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 raising 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.

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 is 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, 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 sought to achieve were:

- 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 Sharm el-Sheikh

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

The three major topics of COP27 were:

- Closing the emissions gap to keep 1.5°C alive
- Loss and damage
- Climate finance

The summit took place a year after its precedent COP26 summit in Glasgow, Scotland. In Glasgow, 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 and be matched by increased ambition and action to meet agreed pledges. Initial texts represented more serious language than used at COP26 in Glasgow, however, the published final text retains the language of Glasgow, phase down, which does not use any binding language to reduce use and is still only applicable to coal, not oil and gas.

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, however in order to achieve this, more work needs to be done by countries, cities and organisations as currently, the numbers on the NDCs don't add up.

Currently, no country has an NDC in place that is able to meet Paris Agreement goals, making net zero by 2050 difficult to envision and 2030 commitments near impossible.

2.1.3 European Policy

2.1.3.1 European Union Climate and Energy Targets

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.

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 July 2016. 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.

On the 27th of June 2018 EU ambassadors endorsed the provisional agreement reached by the Bulgarian Presidency on the revision of the renewable energy directive. The new regulatory framework is expected to pave the way for Europe's transition towards clean energy sources such as wind, solar, hydro, tidal, geothermal, and biomass energy. The agreement sets a headline target of 32% energy from renewable sources at EU level for 2030. Other key elements of the agreement include:

- The design of support schemes will provide for a possibility of technology specific support, aligned with state aid guidelines. The opening of renewable support towards neighbouring member states will be voluntary, at an aspirational pace of at least 5% between 2023 and 2026 and 10% between 2027 and 2030. Except for certain cases, member states will be obliged to issue guarantees of origin.
- Permit granting procedures will be simplified and streamlined with a maximum of two years for regular projects and one year in case of repowering, both extendable for an additional year in case of specific circumstances and notwithstanding environmental and judicial procedures. For small-scale projects below 10.8kW simple notification procedures will apply. Each member state may choose to apply simple notification procedures also to projects up to 50kW.
- The annual increase of energy from renewable sources in heating and cooling will be 1.3 percentage points indicatively, or 1.1 percentage points if waste heat is not taken into account.
- Via obligations on fuel suppliers, renewables will reach a level of at least 14% in transport by 2030, supplemented by a set of facilitative multipliers to boost renewables in different sectors.

The Renewable Energy Directive is the legal framework for the development of renewable energy across all sectors of the EU economy. It establishes common principles and rules to remove barriers, stimulate investments and drive cost reductions in renewable energy technologies, and empowers citizens, consumers and businesses to participate in the clean energy transformation. The Renewable Energy Directive was revised in 2018 and is legally binding since June 2021.

The European Green Deal 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[3] as per the 'Fit for 55' package (July 2021)[4]. The proposed revisions and the REPowerEU plan, presented in May 2022, suggest further evolution of the target to accelerate the take-up of renewables in the EU, including by speeding up the permitting processes for the deployment of renewables.[5]

The proposal 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.

2.1.3.2 REPowerEU

In response to the Russian invasion of Ukraine, the European Commission has proposed an immediate joint European action programme, REPowerEU, to terminate the dependence on imported fossil fuels from Russia before 2030 while ensuring more affordable, secure, and clean energy for Europe.

The plan proposes a series of targeted amendments of existing legislation in the energy field (mostly focused on the Renewable Energy Directive) and sets out a series of measures to rapidly reduce dependence on Russian fossil fuels and fast forward the green transition, while increasing the resilience of the EU-wide energy system. REPowerEU is 'about rapidly reducing European dependence on Russian fossil fuels by fast forwarding the clean transition and joining forces to achieve a more resilient energy system and a true Energy Union'. The Plan outlines short-, medium- and long-term measures which will be completed before 2027. Significantly, the plan sets out actions to diversify energy supplies and quickly substitute fossil fuels by accelerating Europe's clean energy transition.

Recommendations include that the "*planning, construction and operation of plants for the production of energy from renewable sources, their connection to the grid and the related grid itself are considered as being in the overriding public interest and in the interest of public safety and qualify for the most favourable procedure available in their planning and permitting procedures*".

The proposals from the commission specifically seek to increase the target share of renewable energy sources in the Renewable Energy Directive to 45% by 2030 (an increase from 40%). Other measures included enhanced measures to speed up the permitting procedures for new renewable energy power plants and solar installations which would ensure that projects are considered an overriding public interest when it comes to the permitting process.

The Proposed Development represents an opportunity to provide a significant renewable energy generating asset that would reduce the State's reliance on imported fossil fuels, contribute to Europe's clean energy transition and diversify energy supplies in line with the aims and actions of REPowerEU.

2.1.3.3 InvestEU

The InvestEU Programme brings together under one roof the multitude of EU financial instruments currently available and expands the successful model of the Investment Plan for Europe, the Juncker Plan. With InvestEU, the Commission will further boost investment, innovation and job creation, triggering at least €650 billion in additional investment. The Programme will support sustainable

[3] *Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources*
[4] *https://www.consilium.europa.eu/en/policies/eu-plan-for-a-green-transition/*
[5] *https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en*

investments in all sectors of the economy and contribute to the dissemination of sustainable practices among private and public investors.

At least 30% of the InvestEU Programme, in line with the European Green Deal objectives, will support financing for investments that contribute to EU's climate objectives. 60% of the investments supported under the "Sustainable Infrastructure Window" of the InvestEU Fund will contribute to EU's climate and environmental objectives.

The Commission will put forward a climate and environmental tracking methodology for measuring the contribution of specific financing and investment operations to the climate and environmental targets of InvestEU.

Integral to InvestEU is a method for sustainability proofing to assess the environmental, climate and social impacts of projects, taking into consideration the need to ensure proportionality and reduce the administrative burden. The sustainability proofing requirements are based on the 'do no significant harm' principle.

The Commission issued a technical note on climate proofing for infrastructure investment - Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (2021/C 373/01)

Climate proofing is a process that integrates climate change mitigation and adaptation measures into the development of infrastructure projects. It enables European institutional and private investors to make informed decisions on projects that qualify as compatible with the Paris Agreement. The process is divided into two pillars (mitigation, adaptation) and two phases (screening, detailed analysis). The detailed analysis is subject to the outcome of the screening phase, which helps reduce the administrative burden.

Infrastructure is a broad concept encompassing buildings, network infrastructure, and a range of built systems and assets. For instance, the InvestEU Regulation includes a comprehensive list of eligible investments under the sustainable infrastructure policy window.

InvestEU is consistent with the Paris Agreement and EU climate objectives, which means it is consistent with a credible *greenhouse gas (GHG) emission reduction pathway* in line with the EU's new climate targets for 2030 and climate neutrality by 2050, as well as with climate-resilient development. Infrastructure with a *lifespan beyond 2050* should also factor in operation, maintenance and final decommissioning under conditions of climate neutrality, which may include *circular economy* considerations.

The Programme also follows the principle 'energy efficiency first', which is defined in Article 2(18) of Regulation (EU) 2018/1999 of the European Parliament and of the Council and the 'do no significant harm' principle which is derived from the EU's approach to sustainable finance and enshrined in Regulation (EU) 2020/852 of the European Parliament and of the Council.

The Applicant has considered guidance set out in InvestEU where applicable. Please refer to Chapter 10 – Air and Climate for further information.

2.1.3.4 European Green Deal – European Climate Law (2021)

The European Green Deal, initially introduced by the European Commission in December 2019, sets out the 'blueprint' for a transformational change of the 27-country bloc from a high- to a low-carbon economy, without reducing prosperity and while improving people's quality of life, through cleaner air and water, better health and a thriving natural world. The Green Deal is intended to work through a framework of regulation and legislation setting clear overarching targets, e.g. **a bloc-wide goal of net zero carbon emissions by 2050 and a 55% cut in emissions by 2030 (compared with 1990 levels).** This is a substantial increase compared to the existing target, upwards from the previous target of at least 40% (2030 Climate & Energy Framework), and furthermore, these targets demonstrate the ambition necessary to keep the global temperature increase to well below 2°C and pursue efforts to keep it to 1.5°C as per the Paris Agreement. With regard to the energy sector, the Green Deal focuses on 3 no. key principles for

the clean energy transition, which will help reduce greenhouse gas emissions and enhance the quality of life for citizens:

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

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

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

The law aims to ensure that all EU policies contribute to this goal and that all sectors of the economy and society play their part. All 27 no. EU Member States have committed to turning the EU into the first climate neutral continent by 2050. One third of the 1.8 trillion-euro investments from the NextGenerationEU 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 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 worlds first climate-neutral continent by 2050 would clearly be assisted by the Proposed Development.

2.1.4 National Policy

2.1.4.1 Climate Action Plan 2023

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

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

> *"Achieving these ambitions will require a coordinated effort across Ireland and every economic sector will be involved. It requires no less than a national transformation over the coming years in how we work, travel, heat out homes, source our energy and use our land"* [6].

Decarbonisation of the electricity sector is, as noted in CAP23, key to the decarbonisation of other sectors who will depend on electrification including transport, heating and industry. The increase in portion of renewable electricity of 80% by 2023 will come in part from a targeted 9GW of onshore wind. The plan notes:

> *"Achieving further emissions reductions between now and 2030 requires a major step up in how we accelerate and increase the deployment of renewable energy to replace fossil fuels, deliver a flexible system to support renewables, and manage electricity demand[7]".*

Chapter 12 sets out the state of play, targets and actions for the decarbonisation of the Electricity sector. Carbon emissions from electricity have fallen by 45% between 2005 and 2020[8], falling by 19% between 2005-2012 and by 33% between 2012 and 20220. This trend is largely due to the availability of renewable energy generated electricity (a sixfold increase between 2005 and 2020) and an associated reduction in the use of carbon heavy fuels such as peat and coal.

Chapter 8 of CAP23 sets out the aims and objectives relating to 'Delivering a Just Transition in the Midlands Region' stating that: "*A key focus has been to support the transition of the existing workforces and the creation of new enterprise and employment opportunities so that the region remains vibrant, innovative, and prepared to maximise the opportunities that decarbonisation will bring".*

Associated with the Proposed Development and intertwined with the evolving legacy of the State's electricity generation sector, is the role of Bord na Móna in the restoration and rehabilitation of the Bord na Móna bogs. CAP23, building on previous Climate Action Plans accounts for the potential carbon sequestration of the 33,000 hectares of peatlands over 82 of Bord na Móna bogs. In action, these plans are delivered through the Enhanced Decommissioning, Rehabilitation and Restoration Scheme (EDRRS), or Peatland Climate Action Scheme (PCAS) as described in Chapter 10 of this EIAR. A Draft Cutaway Bog Decommissioning and Rehabilitation Plan has been prepared by Bord na Móna for the Ballivor Bog Group, which the footprint of the Proposed Development forms part of, spreading across Bracklin, Ballivor, Carranstown, Lisclogher and Lisclogher West Bogs. CAP23 identifies the rehabilitation of Peatlands as a specific measure with a potential for the sequestration of 100 million tonnes of carbon, part of which will be achieved through the PCAS delivered by Bord na Móna at the Ballivor Bog Group.

Due to the scale of the challenge, and the recognition of central role of the electricity sector in achieving sector wide targets, the electricity sector has been allocated the smallest carbon budget and will require the steepest carbon emissions decline of all sectors – namely a reduction in carbon emission by -75% relative to 2018 baseline. Carbon budgets 1 and 2 allow for 30.02 $MtCO_2eq$ from the electricity sector up to 2025 and 20 $MtCO_2eq$. from 2026-2030. This means an average of 8 $MtCO_2eq$. per annum. Emissions for the period 2021 were 9.98 $MtCO_2eq$., which is in exceedance of 8 $MtCO_2eq$., which means that to keep on track, electricity will now have to achieve annual emissions of c. 7.5 $MtCo_2eq$. from 2022 to 2025.

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

- Reduce annual CO_2eq. emissions from the sector to 3 $MtCO_2eq$ by 2031 (75% reduction compared to 2018)
- Accelerate and increase the deployment of renewable energy to replace fossil fuels;
- Accelerate the delivery of onshore wind, offshore wind and solar through a competitive framework to reach 80% of electricity demand from renewable energy by 2030.

[6] *Climate Action Plan, 2023, p. 08*
[7] *Climate Action Plan 2023, p. 17.*
[8] *https://www.epa.ie/publications/monitoring–assessment/climate-change/air-emissions/irelands-provisionalgreenhouse-gas-emissions-1990-2021.php*

- Target 6GW of onshore wind and to 5 GW of solar by 2025;
- Target 9 GW onshore wind, 8 GW Solar and at least 5 GW of offshore wind by 2030;
- Align the relevant constituent elements of the planning and permitting system to support accelerated renewable energy development, supported by national policy and associated methodologies to inform regional and local planning policies, noting that Development Plans are obliged to set out objectives to facilitate energy infrastructure;
- In line with the emerging EU frameworks, ensure that renewable energy generation projects, and associated infrastructure, will be considered to be in the overriding public interest.

As stated in CAP 2023, '*a major acceleration and increase in onshore wind turbines across the country, transformation of land use from other activities such as agriculture to solar PV, and a hitherto unseen level of electricity network upgrades and construction will be required, as a minimum*' *(Section 12.1.3)* in order to meet the scale of the challenge of the decarbonisation of the electricity sector. The Proposed Development would contribute to the decarbonisation targets, providing a source of renewable energy to the national grid.

In summary, the actions set out in CAP23 are framed to achieve a 75% reduction in carbon emissions from the electricity sector relative to 2018 baseline by 2030. This reduction will be achieved through the execution of renewable energy projects, such as the one proposed which would see a potential installed capacity in the range of 117MW to 169MW, will offer significant benefits in terms of renewable energy production and reduction in greenhouse gas emissions by its net displacement of approximately 6,035,010 tonnes and 8,717,237 tonnes of Carbon Dioxide (CO_2) per annum (Against EU FFC).

2.1.4.2 National Energy Security Framework

The National Energy Security Framework, published in April 2022, sets out the Government's response to Ireland's energy security needs in the context of the war in Ukraine. This Framework identifies a number of potential measures under the planning system that could better support the timely delivery of additional renewable energy sources and the required supporting infrastructure.

Of particular relevance to the subject application, the framework outlines proposals to speed up the country's shift to increased energy efficiency and indigenous renewable energy systems. The framework is divided into three key themes, with associated Government actions. Theme three relates to reducing dependency on imported fossil fuels which includes reducing demand for fossil fuels and replacing fossil fuels with renewables. Relevant to the subject application and the development of solar renewable energy projects in general are the following responses:

Response 25: *Align all elements of the planning system to fully support accelerated renewable energy development;*

Response 26*: Review grid connection arrangements for renewable electricity projects and the development of system services to accelerate the growth in renewable electricity;*

Response 27: *Accelerate investment in the electricity grid and the development of storage technologies.*

The Proposed Development is aligned with the actions set out in the Energy Security Framework as it will contribute to an increase in indigenous renewable energy generation, reducing reliance on imported fossil fuels and increasing energy security for the State.

2.1.4.3 Programme for Government (2020)

The Programme for Government 2020 (June 2020) places specific emphasis on climate change, stating that the next ten years are a critical period in addressing the climate crisis, and therefore, a deliberate and swift approach to reducing more than half of Ireland's carbon emissions over the course of the decade (2020-2030) must be implemented. The programme states that the government are committed to reducing

greenhouse gas emissions by an average of 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. As such, the necessary steps will be taken to deliver at least 70% of electricity from renewable resources by the year 2030 as per the Climate Action Plan 2019. The measures to achieve this will include the following:

- *"Hold Renewable Electricity Support Scheme (RESS) auctions each year from 2020 onwards*
- *Produce a whole-of-government plan setting out how at least 70% renewable electricity generation by 2030 will be delivered and how the necessary skills base, supply chains, legislation, and infrastructure to enable it will be delivered. This new plan will make recommendations for how the deployment of renewable electricity can be speeded up.*
- *Finalise and publish the Wind Energy Guidelines, having regard to the public consultation that has taken place.*
- *Continue EirGrid's programme 'Delivering a Secure, Sustainable Electricity System' (DS3).*
- *Strengthen the policy framework to incentivise electricity storage and interconnection.*"

2.1.4.4 Climate Action and Low Carbon Development Act (2015) & Climate Action and Low Carbon Development (Amendment) Act (2021)

The Climate Action and Low Carbon Development Act 2015 was signed into law on 10th December 2015. The Act provides for the establishment of a national framework with the aim of achieving a low carbon, climate resilient, and environmentally sustainable economy by 2050, referred to in the Act as the "*national transition objective*". The Act provides the tools and structures to transition towards a low carbon economy and it anticipates that this will be achieved through a combination of:

A National Mitigation Plan (to lower Ireland's greenhouse gas emissions levels);

- A National Adaptation Framework (to provide for responses to changes caused by climate change);
- Tailored sectoral plans (to specify the adaptation measures to be taken by each Government ministry); and
- Establishment of the Climate Change Advisory Council to advise Ministers and the Government on climate change matters.

Building on the aims and objectives set out under the Climate Action and Low Carbon Development Act 2015, the Climate Action and Low Carbon Development (Amendment) Act 2021, 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) Bill 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.

'Section 15. F33 (1) A relevant body shall, in so far as practicable, perform its functions in a manner consistent with—

(a)the most recent approved climate action plan,

(b)the most recent approved national long term climate action strategy,

(c)the most recent approved national adaptation framework and approved sectoral adaptation plans,

(d)the furtherance of the national climate objective, and

(e)the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State.'

The Climate Action and Low Carbon Development (Amendment) Act 2021 also outlines the obligations of An Bord Pleanála and/or local authority in assisting the country reach these targets. Section 15 of the Act states as follows: The Proposed Development represents a significant opportunity to be a nationally important wind energy generator, contributing to the 51% reduction in emissions being sought, which is, as outlined above, a legally binding requirement. The Proposed Development is therefore considered compliant with the relevant planning policies and objectives set out at both the European (e.g. European Green Deal) and National tiers of governance in this regard.

2.1.4.5 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 committee recommended that new climate change legislation be enacted by the Oireachtas in 2019 as per the following recommendations:

1. *A target of net zero economy-wide GHG emissions by 2050;*
2. *A provision for a 2030 target, consistent with the GHG emissions reduction pathway to 2050 to be set by 2020 by Statutory Instrument requiring the formal approval of both Houses of the Oireachtas following receipt of advice from the Climate Action Council;*
3. *Provision for five-yearly carbon budgets, consistent with the emissions reduction pathway to 2030 and 2050 targets, to be set by Statutory Instrument requiring the formal approval of both Houses of the Oireachtas following receipt of advice from the Climate Action Council; and*
4. *A target for the renewable share of electricity generation of 70% by 2030.*

Further to the above, the Committee acknowledged that the measures which are currently in place remain insufficient in meeting Ireland's future emission targets and further action is required. 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. It should be highlighted that the above recommendations, in addition to the Committee's articulated concerns on the current national energy system, have ultimately been incorporated within both subsequent legislation (e.g. Climate Action and Low Carbon Development (Amendment) Act (2021)) and recent progress / future scenario assessments (e.g. EirGrid's 'All Island Generation Capacity Statement 2021 – 2030' (September 2021)).

Given the clear concern that the county's future emissions targets may be missed, it is crucial that projects such as the Proposed Development which can contribute in a meaningful manner towards climate change targets which are located in appropriate sites, 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.

2.1.4.6 Emissions Projections for Ireland (2020 – 2040)

In June 2022, the EPA published an update on *Ireland's Greenhouse Gas Emission Projections 2021-2040* using the latest Inventory data for 2020. The report provides an assessment of Ireland's progress towards achieving its National ambitions under the Climate action and Low Carbon Development (Amendment) Act 2021 and the EU emission reduction targets for 2030 as set out under the Effort Sharing Regulation (ESR). Ireland's 2020 target under the ESR is to achieve a 30% reduction on 2005 levels of non-Emissions Trading Scheme (non-ETS) sector emissions (agriculture, transport, residential, commercial, non-energy intensive industry, and waste) with annual binding limits are set for each year over the period 2013-2020. The latest EPA projections show that currently implemented measures (With Existing Measures) will achieve a reduction of 10% on 2005 levels by 2030, significantly short of the 30% reduction target.

The Report assesses the future emission projections under two scenarios: 'With Existing Measures' and 'With Additional Measures'. The 'With Existing Measures'[9] scenario assumes that no additional policies and measures, beyond those already in place by the end of 2020 are implemented. The 'With Additional Measures' scenario assumes implementation of the 'With Existing Measures' scenario in addition to further implementation of Government renewable and energy efficiency policies and measures, as set out in the CAP 2021.

The key findings set out within the report concerning Ireland's progress towards these targets, and overall decarbonising of the national energy system, are summarised below:

- **Projections out to 2030:** Projections in trends of greenhouse gas emissions show total greenhouse gas emissions decreasing from the last inventory year (2020) by 10.5% by 2030 with 'existing measures'. Existing measures includes government policies currently implemented and actions committed to by Government With '*additional measures*' (government policies and measures which have not moved into the implementation phase by the last inventory year (2020)) greenhouse gas emissions trends show a decrease by 28% by 2030. The difference in both scenarios is attributed to significant emissions reductions in key sectors such as power generation, residential, transport and commercial sectors.

- Energy Industry: Under the With Existing Measures scenario, emissions from the energy industries sector are projected to decrease by 37.8% from 8.7 to 5.4 Mt CO_2 eq. over the period 2020 to 2030, with Ireland reaching approximately 70% of electricity consumption from

[9] Environmental Protection Agency, 2022 Ireland's Greenhouse Gas Emission Projections 2021-2040 p. 5

renewable energy by 2030. These projections are based on the implementation of policies set out in CAP 2021.

The energy sector contributed 14.9%% of Ireland's total emissions in 2020 and is projected to decrease to 10.3% in 2030 (in the existing measures scenario). The key trends underpinning the future progress of the sector under both scenarios are described below (underlined for emphasis):

- With Existing Measures
  - Under the With Existing Measures scenario, emissions from the energy industries sector are projected to decrease by 37.8% from 8.7 to 5.4 Mt CO2 eq. over the period 2020 to 2030
  - In terms of the renewable energy generated, this scenario projects Ireland reaching approximately 70% of electricity consumption from renewable energy by 2030. Renewable electricity generation capacity is dominated by wind energy.

- With Additional Measures
  - Under the With Additional Measures scenario, emissions from the energy industries sector are projected to decrease by 48.9% from 8.7 to 4.5 Mt CO_2 eq. over the period 2020 to 2030, this is an additional 1.0 Mt CO_2 eq. more than the WEM scenario.
    This scenario assumed that 80% of electricity generated by renewable energy sources by 2030 as set out in CAP 2021 and is mainly a result of expansion in wind energy[10]

In the context of Ireland's failure to meet the 2013-2020 EU targets for greenhouse gas emissions reductions and the possible outcomes under the above scenarios, the highlights two key messages in relation to Irelands emissions reductions targets:

Firstly, that in the 'additional measures' scenario (i.e fully implementing targets and policies of CAP 2021) Ireland can achieve compliance with the EU Effort Sharing Regulation target. In the Second instance, with the Existing measures scenario, those measures for which resources and commitments are currently in place, the need for swifter action to implement those measures have been identified.

While it is clear that progress is on-going, it is also apparent that there are still significant challenges which will need to be overcome if Ireland is to achieve its 2030 emission targets. Specifically, the EPA states that the level of annual emissions reductions required to achieve a 51% emissions reduction by 2030 (Climate Action and Low Carbon Development (Amendment) Act 2021) is far greater than what is estimated to have occurred due to the COVID lockdown measures in 2020. 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 Development must be encouraged and supported if carbon emission reduction targets are to be met. In this regard, it is estimated that the Proposed Development will have the potential to offset approximately 6,035,010 tonnes and 8,717,237 tonnes of Carbon Dioxide (CO_2) per annum (Against EU FFC), by supplying approximately 70,036 to 101,163 Irish households with electricity annually, which otherwise would rely on fossil fuel sources. Coinciding with the with Proposed Development are the rehabilitation plans ongoing as part of the adherence to conditions of the IPC licence and which will continue to be carried out with the Proposed Development should it be granted permission by the Board. Together, the harnessing of wind energy

[10] Environmental Protection Agency, 2022 Ireland's Greenhouse Gas Emission Projections 2021-2040 p.14

and the rehabilitation of peat bogs at Ballivor Bog Group would develop the area as a model of integrated sustainable development with renewable energy and ecological rehabilitation successfully co-located. The co-location of renewable energy generation and ecological rehabilitation would have a significant positive cumulative impact in relation to climate action resulting from the associated decarbonising of the electricity sector as well as the carbon sequestration. Renewable energy generation and peatland rehabilitation can co-exist harmoniously and effectively and evidence of this has been demonstrated at both Mount Lucas and Cloncreen wind farms. As such, the Proposed Development represents a unique opportunity to deliver carbon offsets through both renewable energy and peatland rehabilitation. Further details in this regard are described in detail in Chapter 10: Air and Climate.

2.1.4.7 Renewable Energy Policy and Targets

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's import dependency was 67% in 2018, down from an average of 89% between 2001 and 2015, arising from the beginning of production of gas from the Corrib field and increasing use of indigenous renewable energy. However, our import dependency was 80% in 2021, with the EU as a whole importing 57.5% of the energy it consumed in 2020. Ireland ranks 8th highest of the 27 member states in terms of import dependency. In 2021 oil accounted for 65% of total energy imports, natural gas 24%, coal 7.7% and renewables 1.22%[11]. SEAI's 'Energy in Ireland – 2022 Report' further expands upon the above analysis, noting that "*Oil has by far the largest share of final energy use at 57% in 2019, more than all other fuel types combined. Transport and home heating account for 86% of oil use.*" The most significant changes noted in the report in terms of fuels included:

- Fossil fuels accounted for 71.5% of all the energy used in Ireland in 2021. Demand for fossil fuels fell by -39% in the 2016-2021 interval, and by 33.1% in the 20 year interval from 2001.
- Coal use decreased by 53% in 2019 and its share of total primary energy requirement fell to 2.6%, down from 10.5% in 2015.
- Total renewable energy increased by 10.3% during 2019. Hydro and wind increased by 28% and 16% respectively. The overall share of renewables in primary energy stood at 11.2% in 2019, up from 10% in 2018.
- Ireland returned to being a net importer of electricity in 2019 for the first time since 2015, importing 55 ktoe.

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 supply and stability. This is further magnified by recent events as a result of the Russian invasion of Ukraine (as highlighted in REPowerEU and the National Energy Security Framework 2022). Against this backdrop, the SEAI states that,

> *"The development of indigenous, distributed renewable energy sources mitigates many of the risks associated with relying on global supply chains and large single pieces of infrastructure, and reduces the exposure to fossil fuel price shocks."*

The Programme for Government (2020) also highlights the need for a clean and reliable supply of energy:

> *"Energy will play a central role in the creation of a strong and sustainable economy over the next decade. 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."*

[11] *SEAI 'Energy Security in Ireland – 2022 Report' (September 2022)*

The projected demand for electricity is clear and to meet that demand viable projects such as that the proposed renewable energy development can directly contribute to Ireland's energy and climate targets.

As mentioned previously, and in light of recent events, there is an increased urgency for diversifying away from imported fossil fuels and increasing indigenous renewable energy generation.

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

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

Following on from an extensive consultation process, a Government White Paper entitled '*Ireland's Transition to a Low Carbon Energy Future 2015-2030*' was published in December 2015 by the Department of Communications, Energy and Natural Resources. 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."*

2.1.4.8 Progress on Targets

EPA Emission's Projections

In June 2022, the EPA published an update on *Ireland's Greenhouse Gas Emission Projections 2021-2040* using the latest Inventory data for 2020. The report provides an assessment of Ireland's progress towards achieving its emission reduction targets for 2021 and 2030 as set out under the EU Effort Sharing Decision (ESD) and Effort Sharing Regulation (ESR). Under the Additional Measures scenario, renewable energy is projected to increase up to 78% of electricity generated by 2030 with emissions from the Energy Industry decreasing by 10% per annum from 2021-30. Increased coal use from 2021 and growing energy demand, including from data centres, threaten to negatively impact achievement of National targets, particularly for the first carbon budget period. The key findings set out within the report concerning Ireland's progress towards these targets, which are summarised below:

2030 Targets: Ireland's 2030 target under the EU ESR on greenhouse gas reduction is a 30% reduction of emissions compared to 2005 levels by 2030. EPA Projections show that *existing measures* will achieve a

reduction of 5% on 2005 levels by 2030, significantly short of the target. However, if measures with the higher ambition (*with Additional Measures)* scenario are implemented, the reduction target can be achieved.

The Report assesses the future emission projections under two scenarios: 'With Existing Measures' and 'With Additional Measures'. The 'With Existing Measures' scenario assumes that no additional policies and measures, beyond those already in place by the end of 2019 are implemented. The 'With Additional Measures' scenario assumes implementation of the 'With Existing Measures' scenario in addition to further implementation of Government renewable and energy efficiency policies and measures, as set out in the CAP. Greenhouse gas emissions projections show total emissions decreasing from 2020 levels by 10.5% by 2030 under the With Existing Measures scenario and by 28% under the With Additional Measures scenario.

The energy sector contributed 14.9% of Ireland's total emissions in 2020 and is projected to decrease to 10.3% in 2030 (in the With Existing Measures scenario). The key trends underpinning the future progress of the sector under both scenarios are described below (underlined for emphasis):

- With existing measures
    - Emissions from the energy industries sector are projected to decrease by 37.8% from to 8.7 to 5.4 Mt CO2 eq over the period 2020 to 2030
    - In terms of the renewable energy generated, this scenario projects Ireland reaching approximately 70% of electricity consumption from renewable energy by 2030. Renewable electricity generation capacity is dominated by wind energy.
- With Additional Measures
    - Emissions from the energy industries sector are projected to decrease by 48.9% from 8.7 to 4.5 Mt CO2 eq over the period 2020 to 2030
    - Assumed that by 2030 renewable energy generation increases to approximately 80% of electricity consumption. This is mainly a result of further expansion in wind energy (comprising 5.0 GW offshore).

In the context of Ireland, and the possible outcomes under the above scenarios, the EPA emphasises the need for 'urgent implementation' of all plans, policies and new measures as a response to reducing carbon emissions:

''These latest Projections highlight the pace and scale of action needed to reduce greenhouse emissions in time to contribute to arresting global temperature rise. Implementation has consistently lagged behind planning. The message form the IPCC is that no further delays are possible to avoid the worst climate outcomes.

Urgent implementation of all climate plans and policies, plus further new measures are needed for Ireland to meet the 51% emissions reduction target and put Ireland on track for climate neutrality by 2050."

While it is clear that progress is on-going, it is also apparent that there are still significant challenges which will need to be overcome if Ireland is to achieve its 2030 emission targets of 51% reduction. With *Additional Measures,* if they are fully implemented, compliance can be achieved with the EU Effort Sharing Regulation target. 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 Development must be encouraged and supported if carbon saving targets are to be met.

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

Table 2-2: 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.			

The Climate Change Advisory Council (CCAC) states within their 2022 Annual Review (August 2022) that to reach "*demanding emissions reductions targets required under our climate targets, wind and solar resources will need to be harnessed to a greater and faster extent than previously considered*". As such, a major prerequisite for a more sustainable and secure energy system is a higher share of renewable energy up to and beyond 2030 to 2050. Each of the scenarios assumes in the analysis that increasing the share of renewable energy and using energy more efficiently are crucial, irrespective of the particular energy mix chosen.

In relation to electricity supply, the CCAC Annual Report for 2022 also states that "*in the context of the climate and energy emergencies, developing our vast renewable resource must be considered as being* ***in the overriding public interest.*** *Targets for onshore wind and solar renewable electricity should be significantly increased, with faster roll out of these and the associated grid reinforcement. Strong political and policy support is needed at a national and local level for the rapid delivery of renewable energy projects."*

Drawing on the 2030 Climate and Energy Framework and the CAP 2019 (since replaced by CAP23), EirGrid's 'All Island Generation Capacity Statement 2021 – 2030' (September 2021) states that the national power system will require unprecedented change over this decade, "a fundamental transition for our electricity sector", in order to accommodate at least 70% of electricity from renewable sources by 2030. Retirement of traditional fossil fuel plant (coal, peat and oil-fired generators), c. 1,650MW of generation over the next 5-years within Ireland, further emphasises the need for a deliberate and swift transition to a low-carbon power system based on renewable energy, natural gas and ancillary supporting infrastructure. With regard to wind energy, the All Island Generation Capacity Statement 2021 – 2030 states that,

> ***"It can be assumed that Ireland's renewable targets will be achieved largely through the deployment of additional wind powered generation."***

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

New onshore wind farms commissioned in Ireland in 2020 brought the total wind capacity to 4,300MW, contributing to the increase in overall RES percentage to 43.3%. This value is set to increase as Ireland endeavours to meet its 2030 renewable targets; specifically, the *All Island Generation Capacity Statement 2021 – 2030* estimates that onshore wind energy will increase by 1,000MW between 2020 and 2025. With regard to wind energy, the Statement states that, wind accounted for 57% of the contribution towards Ireland's renewable energy target in 2019. The peak recorded wind power output was 3,337MW, delivered on 21st February 2020, this represented 73% of demand at that time. Figure 2-1a below shows the annual growth in installed wind generation capacity and overall cumulative capacity since 2000.

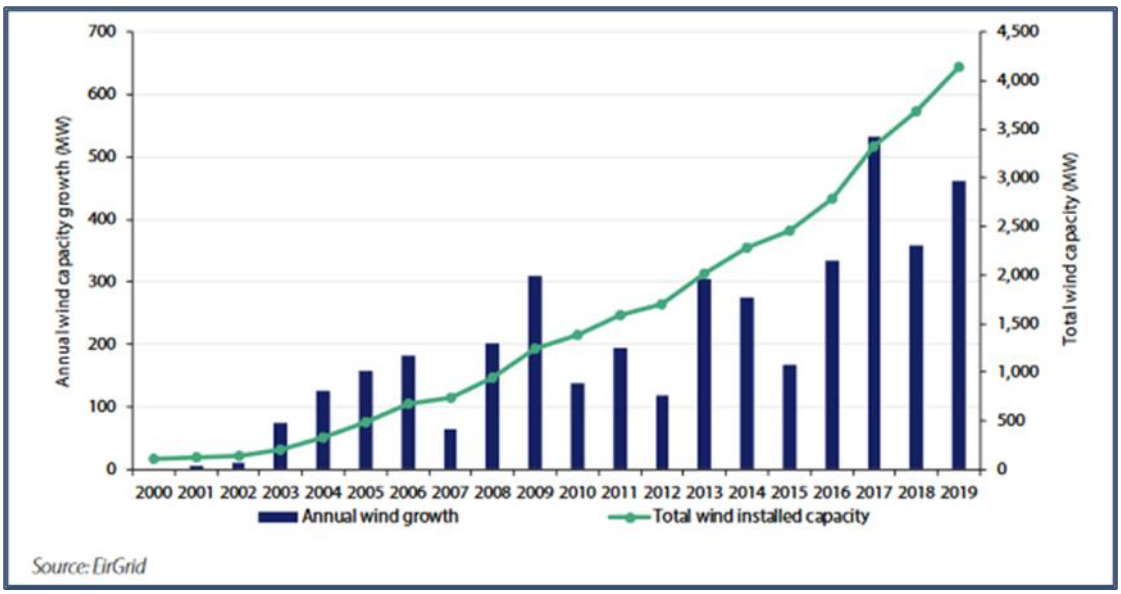


Figure 2-2: : Installed Wind Generating Capacity 2000-2019

The EirGrid Capacity Statement outlines that "*long-term system electricity demand in Ireland is increasing and is forecast to increase significantly, due to the expected expansion of many large energy users, in particular data centres.*"[13] EirGrid's analysis concludes that, for the Median demand level, there may not be adequate generation capacity to meet demand from 2026 for Ireland should Moneypoint power station close and long-term demand continue to rise. In a scenario where any other plant of equivalent capacity closes during this timeframe, earlier deficits could arise. EirGrid also references poor availability of the generation fleet, as exemplified within 2018 and 2019, could give rise to adequacy deficits in 2025. 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[14][15]. Accordingly, the Proposed Development will serve to only contribute to meeting this increasing electricity demand.

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%.

The additional wind energy output from the proposed Ballivor Wind Farm will further assist Ireland's overall capability to meet its future targets.

[13] *EirGrid All-Island Generation Capacity Statement 2021-2030, pg 8*
[14] *https://www.iwea.com/about-wind/faqs*
[15] *EirGrid All-Island Generation Capacity Statement 2021-2030, pg 70*

2.2 Planning Policy Context

2.2.1 National Planning Policy

2.2.1.1 National Planning Framework 2018-2024

The National Planning Framework (NPF), published in February of 2018, forms the top tier of the national land use 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, the NPF contains a number of objectives and policies to facilitate sustainable growth. 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.

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 is 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.

In terms of the Proposed Development **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.

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

> *"The manner in which we plan is important for the sustainability of our environment. Our planning system has influence across a wide range of sectors, both directly and indirectly and interacts with many common issues related to effective environmental management, including*

water services, landscape, flood risk planning, protection of designated sites and species, coastal and marine management, climate mitigation and adaptation, and land use change."

An overarching objective of the NPF is to foster a transition toward a low carbon, climate-resilient society, which reflects the policy ethos established at the European level of governance (e.g. climate change and renewable energy targets – Section 2.1). 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 CAP 2019 & CAP 2023) 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".*

2.2.1.2 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 subject development, climate change. It is stated that the NDP 2021 – 2030 will be the *'largest and greenest ever delivered in Ireland'*, and in this regard, the NDP highlights that extensive consultation was undertaken to ensure that the plan adequately supports the implementation of climate action measures. Reflecting on the recent publication of the IPCC's 6th Assessment Report, the NDP notes that the Irish Government is fully committed to 'playing its part' to ensure that the worst climate change damage can be avoided, e.g. significant reductions in CO_2 and other greenhouse gas emissions as assisted by the achievement of both European and National renewable energy targets. Specifically, the NDP states that,

"The next 10 years are critical if we are to address the climate crisis and ensure a safe and bright future for the planet, and all of us on it.

The investment priorities included in this chapter [Ch. 13] must be delivered to meet the targets set out in the current and future Climate Action Plans, and to achieve our climate objectives. The investment priorities represent a decisive shift towards the achievement of a decarbonised society, demonstrating the Government's unequivocal commitment to securing a carbon neutral future."

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

One of the NDP's strategic climate priorities in the need for low-carbon, resilient electricity systems; specifically, the plan commits to increasing the share of renewable electricity up to 80% by 2030. This is characterised by the NDP as an '*unprecedented commitment to the decarbonisation of electricity supplies*' which, is consistent with the objective in CAP 2023 to meet 80% renewable energy share by 2030

and an explicit driver for the deployment of new renewable generators and the safeguarding / maintenance of existing assets, e.g. the Proposed Development. 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.

2.2.1.3 Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment (2018)

The Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment were issued by Department of Housing, Planning and local Government under Section 28 of the Act in August 2018. The Guidelines provide technical guidance for planning authorities and the Board (competent authorities) on legal and procedural issues and matters of interpretation arising from the amended Directive.

2.2.1.4 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 2006 Guidelines remain the relevant guidelines in place, at the time of lodgement of the planning application, 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.

2.2.1.5 DoHPCLG Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change 2017

In July 2017, the Department of Housing, Planning, Community and Local Government (DoHPCLG) published '*Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change'* under Section 28 of the Planning and Development Act 2000. Planning authorities are obliged to have regard to guidelines issued pursuant to Section 28 in the performance of their functions under the Planning and Development Act 2000 (as amended).

The Guidelines state that it is a specific planning policy requirement under Section 28(1C) of the Act that, in making a development plan with policies or objectives that relate to wind energy developments, a Planning Authority must:

1. *"Ensure that overall national policy on renewable energy as contained in documents such as the Government's 'White Paper on Energy Policy - Ireland's Transition to a Low Carbon Future', as well as the 'National Renewable Energy Action Plan', the 'Strategy for Renewable Energy' and the 'National Mitigation Plan', is acknowledged and documented in the relevant development plan or local area plan;*
2. *Indicate how the implementation of the relevant development plan or local area plan over its effective period will contribute to realising overall national targets on renewable energy and*

climate change mitigation, and in particular wind energy production and the potential wind energy resource (in megawatts); and

3. *Demonstrate detailed compliance with item number (2) above in any proposal by them to introduce or vary a mandatory setback distance or distances for wind turbines from specified land uses or classes of land use into their development plan or local area plan. Such a proposal shall be subject to environmental assessment requirements, for example under the SEA and Habitats Directives. It shall also be a material consideration in SEA, when taking into account likely significant effects on climatic factors, in addition to other factors such as landscape and air, if a mandatory setback or variation to a mandatory setback proposed by a planning authority in a development plan or local area plan would create a significant limitation or constraint on renewable energy projects, including wind turbines, within the administrative area of the plan."*

Department Circular PL5/2017

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

The Department circular also sets out the four key aspects of the *preferred draft approach* being developed to address the key aspects of the review of the 2006 Wind Energy guidelines as follows:

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

2.2.1.6 Draft Wind Energy Development Guidelines

Wind Energy Development Guidelines 2006 (Revisions)

Further to Section 2.2.1.4 it is acknowledged that the Department of the Environment, Community and Local Government published proposed revisions to the wind energy development guidelines in December 2013 as part of a targeted review relating to Noise, Proximity and Shadow Flicker for discussion. Revisions to the Wind Energy Guidelines continue to be considered and draft revisions were published in December 2019, these are further discussed below.

Draft Wind Energy Development Guidelines, December 2019

Following the previous 2013 consultation and subsequent detailed engagement between the relevant Government Departments, a "preferred draft approach" to inform and advance the conclusion of the review of the 2006 guidelines was announced in June 2017. The Department of Housing, Planning and

Local Government published the *Draft Wind Energy Guidelines* in December 2019 and these Draft Wind Energy Guidelines were under public consultation until 19th February 2020.

In line with the previously stated "preferred draft approach", the 2019 Draft Wind Energy Guidelines primarily focus on addressing a number of key aspects including, but not limited to:

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

The design of the proposed project has taken account of the "preferred draft approach" as articulated by the Department in June 2017, and accordingly, has been developed with the provisions of the current Draft Wind Energy Guidelines (2019). At the time of writing the revised wind energy development guidelines have yet to be published as a final document and have yet to be adopted.

The Draft Wind Energy Guidelines state "*A wind energy development is comprised of a group of wind turbines located relatively in the same area which are then interconnected with a medium voltage power collection system together with a communications network. Wind energy development construction consists of turbine foundations, site access roads, power cables and an electrical sub-station; the installation of wind turbines; and the connection of the wind energy development site to the existing electricity grid via overhead lines (involving poles and pylons) or underground cables.*"

In the context of grid connection routes, the Draft Wind Energy Guidelines state that "*In general, it is considered that underground grid connections for wind energy projects are the most appropriate environmental and/or engineering solution, particularly in sensitive landscapes where the visual impacts need to be minimised. Therefore, this should be the default approach. However, there may be cases where specific ground conditions would prevent this, e.g. in upland locations where peat stability issues can arise from large-scale excavation."*

Until new Guidelines are published the relevant guidelines remain those published in 2006. Notwithstanding this, however, where possible the Draft Wind Energy Guidelines have been used to inform the design of the Proposed Development.

2.2.1.7 Code of Practice for Wind Energy Development in Ireland Guidelines for Community Engagement

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. Community engagement in relation to the Proposed Development is outlined in the Ballivor Community Report in Appendix 2-2 of this EIAR.

2.2.2 Regional Planning Policy

2.2.2.1 Regional Spatial and Economic Strategy for the Eastern and Midland Region

The Eastern and Midland Regional Assembly (EMRA) was established on 1st January 2015, is part of the regional tier of governance in Ireland. It is primarily focused on the preparation and implementation of Regional Spatial and Economic Strategies (RSESs), integration of Local Economic and Community Plans (LECPs), management of EU Operational Programmes, EU project participation, implementation of national economic policy, and working with the National Oversight and Audit Commission.

The EMRA decided to make the RSES 2019-2031 for the Eastern and Midland Region on the 28th of June 2019, in accordance with section 24 (9) of the Planning and Development Act 2000 (as amended). The RSES was subject to a Ministerial Direction issued on 14th January 2020.

"The Strategy supports an increase in the amount of new renewable energy sources in the Region. This includes the use of wind energy – both onshore and offshore, biomass, and solar photovoltaics and solar thermal, both on buildings and at a larger scale on appropriate sites in accordance with National policy and the Regional Policy Objectives outlined in this Strategy."

"It is necessary to establish a consistency of approach by planning authorities, both in identifying areas suitable for renewable energy development and having regard to potential impacts, inter alia on biodiversity, landscape and heritage. It is also necessary to reflect the advancements in technology, and reflect the need to engage with, and be responsive to the needs of communities asked to host renewable energy infrastructure."

The RSES 2019-2031 seeks to achieve balanced regional development and full implementation of Project Ireland 2040 – the National Planning Framework. It will be implemented in partnership with local authorities and state agencies to deliver on this vision and build a cohesive and sustainable region. The RSES has identified a number of key Regional Strategic Outcomes which include:

- the need to conserve and enhance the biodiversity of our protected habitats and species including landscape and heritage protection;
- to identify, protect and enhance our Green Infrastructure and ecosystem services;
- to ensure the sustainable management of our natural resources;
- to build climate resilience, to support the transition to a low carbon economy by 2050 and the protection of the healthy natural environment to ensure clean air and water for all

The RSES provides the framework through which the NPF's vision and the related Government policies and objectives will be delivered for the region.

With regards to climate change the RSES notes that:

> *"The overreliance on non-indigenous supplies of energy is still a major issue for the region. Security of energy supply and climate change are important drivers of energy policy in the region. To meet our energy targets, it is important to better leverage natural resources to increase our share of renewable energy. Improving energy efficiency is vital to reduce energy consumption while maintaining or improving economic growth."*

The region has ample resources of wind, solar and ocean energy to provide a significant amount of renewable energy. Over the next ten years there is a predicted growth in energy demand of between 11% and 30%, mainly due to additional data centres. Extra generating capacity will likely be required to accommodate this demand, particularly in the region.

Bord na Móna plays a critical role in contributing to the reduction of greenhouse gas emissions, enhancing Ireland's energy security and contributing to a post-carbon and climate resilient economy.

> "*Climate change is already affecting the terrestrial and marine environment due to rising sea levels, increased sea temperatures, precipitation changes, coastal flooding and erosion and ocean acidification and these changes are likely to continue and intensify over the lifetime of the RSES*[16]*".*

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

Chapter 7 of the RSES details the Region's plans and objectives in relation to the environment. The RSES underlines the need for a well-protected environment which supports human health and wellbeing and which provides a natural resource for Ireland's agriculture and tourism industries.

"*Access to a clean and healthy natural environment is also shown to bring multiple associated health benefits while environmental pollution can have negative effects on human health, on animals and plants and on natural ecosystems. Most sources of environmental pollution are caused by human activities such as transportation, construction, industrial and agriculture activities and domestic waste."*

The following objectives are set out with regards to climate change:

- ***RPO 7.30:***
  Within 1 year of the adoption of the RSES, the EMRA shall seek with other stakeholders to carry out an assessment of transport emissions in the Region to identify GHG forecasting and to analyse the emissions impacts of development in the Region.
- ***RPO 7.31:***
  Within 1 year of carrying out a regional emissions assessment, EMRA shall compile and publish an emissions inventory and, in collaboration with the relevant departments and agencies, agree emissions reductions targets in accordance with agreed national sectoral plans and to support an aggregate 40% reduction in greenhouse gas emissions by 2030 in line with the EU 2030 Framework.
- ***RPO 7.32:***
  With the assistance and support of the Climate Action Regional Offices, local authorities shall develop, adopt and implement local climate adaptation and mitigation strategies which shall address issues including local vulnerability to climate risks and identify and prioritise actions, in accordance with the Guiding Principles of the National Adaptation Framework, National Mitigation Plan.
- ***RPO 7.33:***
  Climate Action Regional Offices shall provide support to the local authorities on the development, adoption and implementation of local climate action strategies (which can address both adaptation and mitigation). Ongoing support should relate to the specific actions, and obligations and timescales for same that must be undertaken by the local authorities in accordance with local climate change adaptation strategies and compliance with national policy.
- ***RPO 7.34:*** *EMRA supports the National Policy Statement on Bioeconomy (2018) and supports the exploration of opportunities in the circular resource-efficient economy including undertaking a bioeconomy feasibility study for the Region to identify the area of*

[16] *Regional Spatial & Economic Strategy 2019-2031, Eastern and Midlands Regional Authority, Section 7.1, p. 150.*

potential growth in the Region to inform investment in line with the national transition objective to a low carbon climate resilient economy.

Chapter 7 also includes policy objectives relating to 'Decarbonising the Energy Sector', outlining that:

> *"The Region will need to shift from its reliance on using fossil fuels and natural gas as its main energy source to a more diverse range of low and zero-carbon sources, including* ***renewable energy*** *and secondary heat sources. Decentralised energy will be critical to the Region's energy supply and will ensure that the Region can become more self-sufficient in relation to its energy needs."*[17]

The following Regional Policy Objectives relate to Decarbonising the Energy Sector:

- ***RPO 7.35:***
  EMRA shall, in conjunction with local authorities in the Region, identify Strategic Energy Zones as areas suitable for larger energy generating projects, the role of community and micro energy production in urban and rural settings and the potential for renewable energy within industrial areas. The Strategic Energy Zones for the Region will ensure all environmental constraints are addressed in the analysis. A regional landscape strategy could be developed to support delivery of projects within the Strategic Energy Zones.
- ***RPO 7.36:***
  Planning policy at local authority level shall reflect and adhere to the principles and planning guidance set out in Department of Housing, Planning and Local Government publications relating to 'Wind Energy Development' and the DCCAE Code of Practice for Wind Energy Development in Ireland on Guidelines for Community Engagement and any other relevant guidance which may be issued in relation to sustainable energy provisions.

In relation to wind energy the RSES recognises and supports the many opportunities for onshore wind as a major source of renewable energy. It is noted that *'opportunities for both commercial and community wind energy projects should be harnessed, having regard to the requirements of DoHPLG Guidelines on Wind Energy'*. It is recognised that wind energy, with current and future developments in technology, has an important role in delivering value and clean electricity for Ireland.

The following regional policies objectives relating to wind energy development have been included in the RSES:

- ***RPO 4.79: Rural Areas***
  Local authorities shall identify and provide policies that recognise the contribution that small towns, villages and rural areas contribute to social and economic wellbeing. As part of this policy provision that seeks to support and protect existing rural economies such as valuable agricultural lands to ensure sustainable food supply, to protect the value and character of open countryside and to support the diversification of rural economies to create additional jobs and maximise opportunities in emerging sectors, such as agri-business, renewable energy, tourism and forestry enterprise is supported.

- ***RPO 4.84: Rural Areas***
  Support the rural economy and initiatives in relation to diversification, agri-business, rural tourism and renewable energy so as to sustain the employment opportunities in rural areas. In keeping with the NPF, the Eastern and Midland Regional Assembly will support the longer-term strategic planning for industrial peatland areas. This may include support, where appropriate, for a Transition Team in place and preparation of a comprehensive after use framework plan for the peatlands and related infrastructure, which addresses

[17] *Regional Spatial & Economic Strategy 2019-2031, Eastern and Midlands Regional Authority, pg 178*

environmental, economic and social issues, including employment and replacement enterprise reflecting the current transition from employment based around peat extraction.

- ***RPO 7.35: Decarbonising the Energy Sector***
  EMRA shall, in conjunction with local authorities in the Region, identify Strategic Energy Zones as areas suitable for larger energy generating projects, the role of community and micro energy production in urban and rural settings and the potential for renewable energy within industrial areas. The Strategic Energy Zones for the Region will ensure all environmental constraints are addressed in the analysis. A regional landscape strategy could be developed to support delivery of projects within the Strategic Energy Zones.
- ***RPO 7.36: Decarbonising the Energy Sector***
  Planning policy at local authority level shall reflect and adhere to the principles and planning guidance set out in Department of Housing, Planning and Local Government publications relating to 'Wind Energy Development' and the DCCAE Code of Practice for Wind Energy Development in Ireland on Guidelines for Community Engagement and any other relevant guidance which may be issued in relation to sustainable energy provisions.

The RSES also states the following in relation to renewable energy and promoting best practice in resilience in critical infrastructure.

> *"Incorporating renewable energy within Ireland's energy supply may improve the resilience of energy infrastructure as reliance on energy imports and the associated concentrated infrastructure is reduced. Distributed renewable energy sources can contribute to local energy system resilience. For example, during both Storm Ophelia and Storm Emma, when the operation of many of Ireland's infrastructures was challenged, wind energy maintained output throughout the adverse conditions and contributed to maintaining local supply and post event recovery to normal operation. The Region should promote best practice in resilience in critical infrastructure, including implementation of emerging European best practice in this regard."*

The Eastern and Midlands Regional Spatial and Economic Strategy (RSES) emphasises that potential 'after uses' of peatlands can present opportunities to contribute to the achievement of climate change mitigation and adaptation, including renewable energy production.

The RSES sets out the expectations for local authorities in respect to their role in in harnessing renewables-focused energy generation system.

> *"Local authorities should harness the potential of renewable energy in the Region across the technological spectrum from wind and solar to biomass and, where applicable, wave energy, focusing in particular on the extensive tracts of publicly owned peat extraction areas in order to enable a managed transition of the local economies of such areas in gaining the economic benefits of greener energy. The provision of infrastructure should be supported in order to facilitate a more distributed, renewables-focused energy generation system, harnessing both on-shore and off-shore potential from energy sources such as wind, wave and solar and connecting sites of optimal energy production to the major sources of demand."*

In relation to wind energy the RSES recognises onshore wind energy as a source of indigenous renewable energy[18]. With regard to the subject application, it can be established that regional policy contained in the RSES supports the Proposed Development, which will contribute to achieving the objectives relating to decarbonising the energy sector, generating employment and contributing to the low carbon economy in the Eastern and Midland Region. The Proposed Development will directly support the achievement of a sustainable, secure and resilient energy supply in a manner consistent with policies and objectives of the RSES.

[18] *Regional Spatial & Economic Strategy 2019-2031, Eastern and Midlands Regional Authority, pg. 178*

2.2.3 Local Planning Policy

The site falls across the administrative area of both Meath and Westmeath County Councils and therefore the provisions of both County Development Plans (CDPs) for these areas have been considered and are set out below.

2.2.3.1 Meath County Development Plan 2021-2027

The Meath County Development Plan 2021-2027 (MCDP) came into effect on the 3rd November 2021, and it recognises the importance of developing the renewable energy resources of the County in order to reduce dependence on fossil fuels. It acknowledges the importance of reducing greenhouse gas emissions by improving security of supply and the environmental benefits of moving to a low carbon green economy. The MCDP, as part of the requirements of the National Climate Change Adaptation Framework (2012), has prepared a Climate Change Strategy which will ensure that the MCDP will appropriately address adaptation to climate change. The proposed renewable energy development at Ballivor will significantly contribute to achieving the climate mitigation, adaptation and renewable energy aims of the MCDP, as set out in further detail below.

The MCDP recognises that Ireland's greenhouse gas emissions must be reduced by at least 80% by 2050 and that the feasible renewable energy options for the County include onshore wind, offshore wind (single turbines and groups) which will significantly contribute to the reduction of greenhouse gas emissions. The plan establishes the role of the MCDP in the promotion of low carbon development and in the sustainable development of such:

> *"This Development Plan has an overarching role in progressing a sustainable energy future for the County by recognising the central role of land use planning in promoting a low carbon society and mitigating the impacts of climate change[19]".*

Table 2-3 below sets out the key Policy provisions as set out in Chapter 10: *Climate Change Strategy* of the MCDP. The Proposed Development at Ballivor Bog group is consistent with the objectives of the MCDP, in particular those which seek to reduce greenhouse gas emissions produced by the energy sector by utilising the natural resources of the County.

Chapter 11 of the MCDP: Development Management Standards sets out the criteria under which proposals for wind energy developments will be assessed and these are listed in Appendix 2-3 of this EIAR.

[19] *Meath County Development Plan 2021-2027 Section 6.15.0*

Table 2-3: Meath County Development Plan 2021-2027 - Policy objectives relevant to the Proposed Development

Chapter 10 Climate Change Strategy	
Policy Ref	**Policy Text**
INF POL 34	To promote sustainable energy sources, locally based renewable energy alternatives, where such development does not have a negative impact on the surrounding environment (including water quality), landscape, biodiversity, natural and built heritage, or local amenities
INF POL 35	To seek a reduction in greenhouse gases through energy efficiency and the development of renewable energy sources utilising the natural resources of the County in an environmentally acceptable manner consistent with best practice and planning principles
INF POL 36	To support the implementation of the National Climate Change Strategy and to facilitate measures which seek to reduce emissions of greenhouse gases."
INF POL 41	*"To encourage the development of wind energy, in accordance with Government policy and having regard to the Landscape Character Assessment of the County and the Wind Energy Development Guidelines (2006) or any revisions thereof."*
INF POL 42	To support the identification, in conjunction with EMRA, of Strategic Energy Zones, areas suitable to accommodate large energy generating projects within the Eastern and Midlands Regional area
INF POL 44	To support Sustainable Energy Communities and local community group initiatives to develop clean energy opportunities within the county
INF POL 45	To support the development and implementation of a local Climate Action Strategy which should identify vulnerability climate risks, quantify emissions produced, identify costs and prioritise adaptation actions in accordance with the National Adaptation Framework
INF OBJ 39	To support Ireland's renewable energy commitments outlined in national policy by facilitating the development and exploitation of renewable energy sources such as solar, wind, geothermal, hydro and bio-energy at suitable locations within the County where such development does not have a negative impact on the surrounding environment (including water quality), landscape, biodiversity or local amenities so as to provide for further residential and enterprise development within the county
INF OBJ 41	To promote the generation and supply of low carbon and renewable energy alternatives, having regard to the opportunities offered by the settlement hierarchy of the County and the built environment
INF OBJ 47	To investigate the preparation of a Renewable Energy Strategy promoting technologies which are most viable in the County

A review of the Climate Change Strategy (Chapter 10) and the Development Management Standards (Chapter 11) of the MCDP illustrates that the development of wind energy projects is both supported by and consistent with policy in the plan, which has set out the development of wind energy as a method of climate change adaptation.

2.2.3.2 Landscape Character Areas

The 2007 County Meath Landscape Character Assessment (MLCA) comprises Appendix A.05 of the MCDP 2021-2007, it identifies and designates 4 No. Landscape Character Types and 20 distinct Landscape Character Areas (LCAs). The Proposed Development is located in the 'Lowland Areas' Landscape Character Type and LCA 15 - South West Lowlands. LCA 15 is described -

> *"The area is characterised by rolling hills interspersed with beech copses and well-wooded hedgerows dividing rough pasture. The area is characterised by rolling hills interspersed with beech copses and well-wooded hedgerows dividing rough pasture. The main transport routes are the N4 from Enfield to Kinnegad and the Royal Canal (a tourist route). This is one of the more remote areas of Meath with only the village of Conard servicing a large area. Pasture farmland is dominant although there is rough pasture in the upland areas interspersed with a mix of woodland plantations, small copses and scrubby woodland more prevalent in the south west. Fields are small to medium sized and enclosed with well-wooded hedgerows."*

In relation to views in LCA 15, the MLCA reports:

> *"Views within this area are generally limited by the complex topography and mature vegetation except at the tops of drumlins and from bridges crossing the Royal Canal where panoramic views are available. Short-range views are channelled along narrow valleys between drumlins often along roads and the lowland adjacent to the Royal Canal."*

The MCDP attributes landscape sensitivity to designated LCAs within the county. Landscape Sensitivity is defined in the MCDP as:

> *"the overall resilience of a landscape character area to sustain its character in the face of change and its ability to recover from loss or damage to its components. Sensitivity is evaluated from 'High' to 'Low' and is based on the interaction of individual components such as landform, amount of evident historical features (time depth) and distribution of viewers. A highly sensitive landscape is likely to be vulnerable, fragile and susceptible to change whereas a landscape with low sensitivity is likely to be more robust and/or tolerant of change."*

A Matrix of Landscape Character which indicates the Value, Importance and Sensitivity of Landscape Character Areas is included in the Meath Landscape Character Assessment 2007, which forms Appendix 5 of the Meath County Development Plan 2021-2027. The Proposed Development is located in LCA 15 – Southwest Lowlands, which is deemed to be an LCA of 'High' landscape value, 'Regional' importance and overall 'Medium' sensitivity.

The MCDP attributes landscape sensitivity to designated LCAs within the county. Landscape Sensitivity is defined in the MCDP as:

> *"the overall resilience of a landscape character area to sustain its character in the face of change and its ability to recover from loss or damage to its components. Sensitivity is evaluated from 'High' to 'Low' and is based on the interaction of individual components such as landform, amount of evident historical features (time depth) and distribution of viewers. A highly sensitive landscape is likely to be*

vulnerable, fragile and susceptible to change whereas a landscape with low sensitivity is likely to be more robust and/or tolerant of change."

Please refer to Chapter 13 of this EIAR considers landscape character and landscape sensitivity designations of County Meath in relation to the Proposed Development in detail.

2.2.3.3 Wind Energy

Wind Energy is specifically dealt with in Section 6.15.3.2 of the Meath County Development Plan where it is acknowledged that:

"In 2020, Ireland fell short of its mandatory European target for an overall 16% renewable energy share. However, if Ireland is to reach our 2030 renewable electricity target, 70% of our electricity generation must be from renewable energy."

It is noted that this target has since increased to 80% (as set out in CAP23) and in relation to wind energy, the MCDP makes the following clear in relation to the provision of additional wind energy development:

*"**INF POL 40:** The Council will continue to support and encourage the principle of development of wind energy, in accordance with Government policy and having regard to the provisions of the Landscape Characterisation Assessment of the County and the Wind Energy Development Guidelines (2006) or any revisions thereof."*

Section 6.15.3.6 of the MCDP goes on to discuss energy efficiency and again clarifies that the Local Authority will support the concept of generating renewable energy at local level, in this regard the MCDP states that the Council will endeavour:

- *"To promote the rational uses of energy;*
- *To promote renewable energy;*
- *To promote and disseminate energy information;*
- *To protect the environment;*
- *To reduce energy waste in all sectors of society, and;*
- *To encourage the replacement of imported fossil fuels with regionally generated renewable energy in an effort to ensure security of energy supply, where it is feasible"*

There is currently no dedicated Wind Energy Strategy for County Meath, however, in relation to the suitability of locations for wind energy developments, the Meath Landscape Capacity Assessment (LCA) forms Appendix A0.5 of the MCDP. It includes landscape capacity designations ('Low', 'Medium' or 'High') and descriptions for different types of development for each designated LCA. As reported previously, the Proposed Development is located in LCA 15 - South West Lowlands, which is designated as having a 'Medium' capacity to accommodate wind turbines. The Meath LCA states the following in relation to LCA 15:

"Medium potential capacity to accommodate wind farms or single turbines because views within this LCA are generally short range and limited by topography and vegetation so there are opportunities for choosing locations where visual impacts are minimal. However, such development could cause the loss or degradation of hedgerows and trees and archaeology so location will be a critical consideration".

A detailed landscape visual impact assessment was carried out as part of this EIAR and is included in Chapter 13 of this EIAR.

2.2.3.4 Climate Change Strategy

The Adopted Meath CDP 2021-2027 acknowledges the necessity to address the causes of climate change by reducing the reliance fossil fuels and greenhouse gas emissions.

"Mitigation of the causes and impacts of climate change is one of the cross-cutting themes of this Development Plan."

It is the objective of Meath County Council to support the implementation of the National Climate Change Strategy and to facilitate measures which seek to reduce emissions of greenhouse gases by reducing Meath County Council's emissions and by reducing CO2 emissions of the county by at least 40% by 2030. The Proposed Development will have the potential to offset approximately 6,035,010 tonnes and 8,717,237 tonnes of Carbon Dioxide (CO_2) per annum (Against EU FFC) by supplying approximately 70,036 to 101,163 Irish households with electricity per year, which otherwise would rely on fossil fuel sources. The carbon offsets resulting from the Proposed Development are described in detail in Chapter 10 of the EIAR: Air and Climate.

The Proposed Development will therefore contribute to reducing the reliance on fossil fuels and greenhouse gas emissions both on a local and national scale, in line with the Council's aim to reduce CO2 emissions of the county.

Landscape Character Assessment (LCA) for County Meath

The Landscape Character Assessment of County Meath, prepared as part of the MCDP 2013-2019, has been extended to the MCDP (Appendix A.05) and any references to the historic plan are superseded by Volume 1 of the MCDP 2021-2027. Undertaken prior to 2013, the assessment was informed by the infrastructure and local and national policies of that time. Meath is divided into 4 no. Landscape Character Types (LCTs):

1. Hills and Upland Areas
2. Lowland Areas
3. River Corridors and Estuaries
4. Coastal Areas

These LCTs are further divided into 20 Landscape Character Areas (LCAs) and the assessment classifies the site of the Proposed Development as sitting within LCA 15: South West Lowlands. This area is described as "*rolling hills interspersed with beech copses and well-wooded hedgerows dividing rough pasture*" which is considered a High Value landscape of Regional Importance with a Medium Landscape Sensitivity. Furthermore, the assessment states that this LCA has a "*Medium potential capacity to accommodate overhead cables, substations and communication masts because views within this LCA are generally short range and limited by topography and vegetation*".

The assessment defines 'Medium Potential Capacity' as being a landscape which has medium sensitivity to the type of development proposed (energy infrastructure). Chapter 13 of this EIAR provides a comprehensive assessment in relation to Landscape and Visual Assessment.

Development Management Standards

Section 11 of the MCDP contains the development management standards. Wind Energy is discussed in Section 11.8.3 where the following is stated:

"The Council require that any pre-application discussion and/or planning application proposal for wind farm development sets out how the project complies with DM POL 27 and DM OBJ 76. The Council will support appropriate innovative designs for wind farms. Topographical enclosures and extensive areas of degraded or previously developed lands should be identified for wind farm development to help minimise visual impacts and to harmonise wind turbines with the landscape. In general, matt finishes and neutral colours for turbines and structures are required. All planning applications shall be accompanied by detailed proposals for the restoration of the site after removal of the turbines and associated infrastructure including access roads. Adequate financial security will be required to ensure site restoration and removal of the wind farm.

The development management standards set out in the MCDP relevant to wind farm development are set out in Table 1 of Appendix 2-3.

The design of the Proposed Development has been fully informed by the various assessments carried out throughout the EIAR preparation process and has incorporated a full range of appropriate mitigation measures in compliance with the provisions of DM OBJ 76.

2.2.3.5 Summary Conclusion on Compliance with Meath County Development Plan

The proposed wind energy infrastructure is supported by robust National and Regional policy that promotes renewable energy generation. Within the Meath County Development Plan, policy **INF POL 41** encourages the development of wind energy within the County. The Meath County Development Plan 2021-2027 states that the Council is committed to developing a more diverse range and combination of energy sources, including wind, in line with national legislation. The Biodiversity section of this EIAR demonstrates that the proposal will not give rise to significant adverse impacts on natural heritage while the Noise and Shadow Flicker assessments demonstrate that the Proposed Development will not give rise to significant adverse impacts on residential amenity. Accordingly, it is submitted that the Proposed Development is compliant with the relevant provisions of the Meath County Development Plan 2021-2027.

2.2.3.6 Westmeath County Development Plan 2021-2027

The Westmeath County Development Plan 2021-2027 (WCDP) came into effect on the 3rd May 2021. The WCDP provides for the development of indigenous energy resources, with an emphasis on renewable energy supplies. The Council acknowledges the importance of renewable energy in reducing anthropogenic greenhouse gas emissions and the contribution of renewable energy in achieving national and EU target net zero greenhouse gas emissions by 2050. Section 10.23 of the WCDP deals specifically with wind energy and notes the following:

> *"The Council recognises the importance of wind energy as a renewable energy source which can play a vital role in achieving national targets in relation to reductions in fossil fuel dependency and therefore greenhouse gas emissions and seeks to enable renewable and wind energy resources of County Westmeath to be harnessed in a manner that is consistent with proper planning and sustainable development of the area."*

The WCDP identifies cut-over bogs as locations preferred for wind energy developments which are to wind energy with the potential for restoration and biodiversity enhancement to co-locate (Section 10.23.2):

> ***"The preferred locations for large scale energy production, in the form of windfarms, is onto cutover cutaway peatlands in the County, subject to nature conservation and habitat protection requirements being fully addressed."***

The need to consider the after use of cut-over bogs is addressed in Chapter 12 of the WCDP "*Natural Heritage and Green Infrastructure*" and is relevant to the subject application:

> ***CPO 12.68:*** *"Work with relevant agencies such as Eastern and Midland Regional Assembly, Bord na Mona, NPWS, Coillte and adjacent Local Authorities to prepare an after-use framework plan for the peatlands and related infrastructure, to provide for the future sustainable and environmentally sensitive use of large industrial peatlands sites when peat harvesting finishes. Such plans should have regard to both National and Regional frameworks concerning the future use of peatlands, including cutaway bogs".*

In relation to the above policy a Draft Ministerial Direction was issued by the Minister for Housing, Local Government and Heritage on the 29th April 2021 to the planning authority requesting in part the deletion

of wind energy policy objective CPO 10.143 in its entirety from the Development Plan. The Draft Ministerial Direction includes the following criticism of CPO 10.143:

> *"(II) Policy objective CPO 10.143 renders it impossible to progress a wind energy project with a wind turbine tip height of over 100 meters or over 150 meters in the vast majority of the county which would significantly limit or constrain renewable energy projects to the extent that it is inconsistent with the requirement to demonstrate the contribution of county Westmeath to realizing overall national targets on renewable energy and climate change mitigation.*
>
> *(III) The development plan contains conflicting objectives on wind energy development such that the policy objectives supporting wind and renewable energy development in chapters 10 and 11 of the adopted development plan cannot be achieved having regard to the separation distances required by wind energy policy objective CPO 10.143."*

The Local Authority had at that time adopted the Plan without regard to this Direction. On the 28th of September 2022, the Minister for Local Government and Planning issued a Decision to Issue a Direction to Westmeath County Council on the Westmeath County Development Plan 2021 – 2027, in accordance with Section 31 of the Act. The direction stipulated the deletion of wind energy policy objective CPO 10.143 in its entirety from Section 10.23.2 of the Development Plan as per the Chief Executive's recommendation.

In relation to development of wind energy, the In recognition of national wind energy policy, the WCDP states (Section 16.13.1):

> *"The Council will have regard to the Wind Energy Development Guidelines for Planning Authorities, prepared by the Department of Environment, Heritage and Local Government, or any update made thereto".*

The key objectives provisions of the WCDP in relation to renewable energy relevant to the Proposed Development are set out in Table 2-4:

Table 2-4: Relevant objectives and standards in the WCDP related to renewable energy development.

Policy/Objective	Wording
CPO 10.139	Support local, regional, national and international initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which make use of the natural resources in an environmentally acceptable manner and having particular regard to the requirements of the Habitats Directive.
CPO 10.140	Facilitate measures which seek to reduce emissions of greenhouse gases and support the implementation of actions identified in the Westmeath County Council Climate Change Adaptation Strategy 2019-2024 and any future amendments
CPO 10.142	Have regard to the principles and planning guidance set out in Department of Housing, Planning and Local Government publications relating to 'Wind Energy Development' and the DCCAE Code of Practice for Wind Energy Development in Ireland and any other relevant guidance which may be issued in relation to sustainable energy provisions

CPO 10.143[20]	Provide the following separation distances between wind turbines and residential dwellings: › 500 metres, where the tip height of the wind turbine blade is greater than 25 metres but does not exceed 50 metres. › 1000 metres, where the tip height of the wind turbine blade is greater than 50 metres but does not exceed 100 metres. › 1500 metres, where the tip height of the wind turbine blade is greater than 100 metres but does not exceed 150 metres. › More than 2000 metres, where the tip height of the wind turbine blade is greater than 150 metres.
CPO 10.144	Ensure the security of energy supply by supporting the potential of the wind energy resources of the County in a manner that is consistent with proper planning and sustainable development of the area
CPO 10.146	To strictly direct large-scale energy production projects, in the form of wind farms, onto cutover cutaway peatlands in the County, subject to environmental, landscape, habitats and wildlife protection requirements being addressed Projects that meet or exceed any of the following criteria: › Height: over 100m to blade tip, or › Scale: More than five turbines, or › Output: Having a total output of greater than 5MW Developments sited on peatlands have the potential to increase overall carbon losses. Proposals for such development should demonstrate that the following has been considered: › Peatland stability; and › Carbon emissions balance
CPO 10.148	With regard to wind energy developments, to ensure that the potential for visual disturbance should be mitigated by applying an appropriate setback distance, which, where relevant, complies with available Ministerial Guidelines
CPO 10.149	Support the preparation of a Management Plan for the Industrial Peatlands in the County, in consultation with stakeholders and adjacent Local Authorities. The Plan should focus on recreational opportunities, renewable energy, hydrological and ecological considerations subject to environmental assessment and the requirements of Article 6 of the Habitats Directive
CPO 10.156	Support and advance the provision of renewable energy resources and programmes in line with the Government's National Renewable Energy Action Plan (NREAP), the Governments' Energy White Paper "Irelands Transition to a Low Carbon Energy Future (2015-2030) and any other relevant policy adopted during the lifetime of this plan

[20] *Subject to Draft Ministerial Direction issued by the Minister for Housing, Local Government and Heritage on the 29th April 2021 to the planning authority requesting in part the deletion of wind energy policy objective CPO 10.143 in its entirety from the Development Plan.*

CPO 10.158	Support the production of sustainable energy from renewable sources such as wind, solar, bio-energy and the development of waste to energy/Combined Heat and Power Schemes at suitable locations and subject to compliance with the Habitats Directive
PO 10.161	Prepare a Renewable Energy Strategy for the County over the lifetime of this plan and subject to the availability of resources. This strategy will support the development of renewable energy infrastructure to deliver government objectives in relation to energy efficiency and the transition to a low carbon future

As set out above, the WCDP acknowledges the importance of transitioning to a low carbon economy, future diversification, and adaptation to new energy technologies. It also identifies wind, as a form of renewable energy which will help in managing the transition of the local economies of such areas in gaining the economic benefits of greener energy. The Council seeks to enable renewable and wind energy resources of County Westmeath to be harnessed in a manner that is consistent with proper planning and sustainable development of the area. The Proposed Development will make a significant contribution to Council's objectives relating to increasing renewable energy generation, reducing reliance on fossil fuels, and reducing greenhouse gas emissions. As such, it is submitted that there is strong policy support for the Proposed Development in principle at a local level.

2.2.3.7 Landscape Policy for County Westmeath

The WCDP sets out policies on landscape in *Chapter 13 Landscape and Lake Amenities*. The following policies and objectives deal with the Westmeath landscape generally:

> *"It is a policy of Westmeath County Council to:*
>
> ***CPO 13.2** Protect the distinctiveness, value and sensitivity of County Westmeath's landscapes and lakelands by recognising their capacity to sustainably integrate development.*
>
> ***CPO 13.4** Conserve and enhance the high nature conservation value of the Landscape Character Areas in order to create/protect ecologically resilient and varied landscapes.*
>
> ***CPO 13.6** Require that development is sensitively designed, so as to minimise its visual impact on the landscape, nature conservation, archaeology and groundwater quality."*

A Landscape Character Assessment (LCA) of Westmeath is contained in Section 13.6 of the WMCDP. The aim of the assessment is to provide an understanding of the value and sensitivity of the county's landscapes and its future management needs. The Landscape Character Assessment for Westmeath divides the county into 11 Landscape Character Areas (LCAs); specific to the Proposed Development, the subject site is located within the LCA 3: River Deel Lowlands. The River Deel Lowlands is described in the Plan as:

> "*Low-lying pasture punctuated with small lakes which are flanked by scrub and wet woodland. These rivers form part of the River Boyne and Blackwater SAC complex. The area east of Delvin and running south along the Meath Border is characterised by cutover, cutaway bogs and small tracts of intact bog. Settlements within this area include Clonmellon, Delvin, Killucan-Rathwire and Raharney which are located within the eastern commuter belt to Dublin"*

Map 69 of the WCDP illustrates the wind energy development capacity of the 11 LCAs for the county and categorises the River Deel Lowlands as has having a *Low Capacity*. It should be noted that all LCAs are considered Low Capacity except for LCA 9: Uisneach (No Capacity).

There are no High Amenity Areas, protected Views or Public Rights of Way identified in the Development Plan through the development site. Please refer to Chapter 13 of this EIAR which considers the statutory policy and objectives related to the landscape of County Westmeath contained in the WCDP.

2.2.3.8 Summary Conclusion on Compliance with Westmeath County Development Plan

In summary the County Development Plan for Westmeath fully recognises the importance of obtaining more energy from renewable sources. Westmeath 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 is a range of policy in place which supports the development of renewable energy at locations such as the subject site. In particular, **Policy CPO 10.146** promotes the location of wind farm developments at cutover cutaway peatlands in the county such as that which is proposed at Ballivor. The Biodiversity Chapter of this EIAR demonstrates that the proposal will not give rise to significant adverse impacts on natural heritage. The Noise and Shadow Flicker assessments also show that the Proposed Development will not give rise to significant adverse impacts on residential amenity. Accordingly, the Proposed Development is compliant with the relevant provisions of the Westmeath County Development Plan 2021-2027.

2.2.4 Other Relevant Material Considerations

IWEA Best Practice Guidelines for the Irish Wind Energy Industry 2012

The Irish Wind Energy Association (IWEA) 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).

IWEA Best Practice Principles in Community Engagement and Community Commitment 2013

The 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.

The applicant has engaged in consultations and continues to engage with the surrounding population in the direct vicinity of the Proposed Development through letter drops to the local community. A dedicated community liaison officer has also been appointed to the project with the general public being provided with various contact details (including email address and phone number) to facilitate any queries which

may arise. In the light of the various Covid-19 restrictions which have been implemented by the government of Ireland over 2020 and 2021 the applicant was unable to facilitate door to door call outs and public events as initially planned for, however, the applicant has provided meaningful engagement as detailed in the Ballivor Community Report presented in Appendix 2-2.

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. Community engagement in relation to the Proposed Development is outlined in the Ballivor Community Report in Appendix 2-2.

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, with ECP-2.1 applications submitted in September 2020. ECP-2.2 applications are due in September 2021 and ECP-2.3 applications are scheduled for September 2022.

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 additional renewable energy projects including wind farms had an opportunity to secure a new grid connection offer.

With the ECP-2 ruleset now published and with a timeline set for the next rounds of applications there is a clear pathway for the Proposed Development to secure a grid connection offer in a timely manner, subject to receipt of planning permission.

Renewable Energy Support Scheme (RESS)

The Climate Action Plan, first published in June 2019 (and updated in 2021 and 2023), is the Government's plan to give Irish people a cleaner, safer and more sustainable future. The Plan sets out actions across every sector which will ensure we meet our future climate commitments. A key part of the Plan is a move to 80% renewable electricity by 2030, a measure which will be driven by the introduction of the Renewable Electricity Support Scheme ('RESS').

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

2.3 Bord na Mona Cutover Peatlands and Climate Change

2.3.1 Introduction

Beginning in 1946, Bord na Móna acquired extensive peatlands and associated areas principally for the industrial harvesting of peat for energy (electricity production and briquettes) and as horticultural growing media. These lands extend in total to about 80,000 hectares and are located mainly in the Irish midlands. In January 2021 Bord na Móna formally took the decision to cease industrial scale peat extraction on its land bank.

Bord na Móna has been examining a range of after uses of its land bank post peat extraction primarily since the 1970's and 80's[21]. Potential uses examined and developed include forestry, amenity, mineral extraction, high value biodiversity and more recently the co-location of large-scale renewable energy production with existing and previously identified uses. Large tracts of cutover and cutaway peatlands have been rehabilitated, are currently undergoing rehabilitation, or will be undergoing rehabilitation in the coming years.

CAP23 recognises the role that peatland rehabilitation has in achieving Ireland's greenhouse gas emission reduction targets. Returning peatlands to more natural conditions will reduce carbon emissions and deliver a range of climate benefits, including long-term carbon storage; increased carbon sequestration; and enhanced resilience to the locked-in impacts of climate change. The improvements to peatlands will enrich Ireland's natural capital; increase ecosystem services; strengthen biodiversity; and improve water quality and storage attenuation; as well as developing amenity potential.

2.3.2 Cutover Peatland Rehabilitation

CAP23 identifies six High Impact Sectors where reductions in GHG emissions can be achieved. Among these is Land Use including forestry and peatlands with a target of rehabilitating 77,600 ha of peatland.

The target of rehabilitating 77,600 ha of peatland in Ireland as proposed in CAP23 aligns with the proposed Nature Restoration Directive.[22] The proposed new Directive is a key element of the EU Biodiversity Strategy, which calls for binding targets to restore degraded ecosystems, in particular those with the most potential to capture and store carbon and to prevent and reduce the impact of natural disasters.

Europe's nature is in decline, with more than 80% of habitats in poor condition. The proposed Directive aims to restore ecosystems, habitats and species across the EU's land and sea areas in order to:

- enable the long-term and sustained recovery of biodiverse and resilient nature;
- contribute to achieving the EU's climate mitigation and climate adaptation objectives;
- meet international commitments.

The proposal combines an overarching restoration objective for the long-term recovery of nature in the EU's land and sea areas with binding restoration targets for specific habitats and species. The measures will cover at least 20% of the EU's land and sea areas by 2030, and ultimately all ecosystems in need of restoration by 2050.

Bord na Móna is following a decarbonisation strategy aimed at reducing the carbon emissions from its activities that will support the CAP23 plan. Bord na Móna's Brown to Green strategy is focused on

[21] *Strategic Framework for the Future use of Peatlands . Bord na Móna May 2011*
[22] *https://environment.ec.europa.eu/publications/nature-restoration-law_en*

supporting and delivering Ireland's objective, to become carbon neutral by 2050. One of the most straightforward ways to reduce carbon emissions from land-use is the managed rewetting of peatlands. The first step was ceasing industrial peat extraction. Re-wetting improves carbon storage and locks the residual peat in the ground. Developing stable cutaway peatland habitats reduces carbon emissions so that the emission of greenhouse gases or via water runoff are reduced.

There is a world-wide consensus that restoration of hydrology in damaged peatlands can improve carbon storage. Researchers in Ireland have also reached the same conclusion for Irish peatlands. The Environmental Protection Agency funded the BOGLAND project (Renou-Wilson et. al., 2011) and concluded that the managed re-wetting of Irish bogs was essential for returning damaged peatlands on a trajectory towards becoming peat-forming ecosystems again. The EPA-funded Carbon Restore Project (Renou-Wilson et. al., 2011) also reported that actively managed rewetting of drained peatlands in Ireland can lead to restoration of functional peatland, such as the return of typical plant and animal species, which in turn may lead to the restoration of peat-formation and the Carbon-sink function.

Bord na Móna lands are operated under the EPA IPC Licensing regime. The Bord na Móna IPC licences require decommissioning and rehabilitation plans to be drafted and then finalised and implemented once the peat extraction activity has ceased.

The rehabilitation works that are proposed (as part of compliance with Condition 10 of the IPC Licence) within the redline boundary of the subject application are detailed in the Decommissioning and Rehabilitation Plans for Lisclogher, Bracklin, Carranstown and Ballivor bogs (Appendix 6.6 of this EIAR). Decommissioning and Rehabilitation Plans have been prepared by Bord na Móna in compliance with Condition 10 of the specific IPC Licence for the site. The Plans form part of Bord na Móna's obligations under the IPC Licence and will be finalised and agreed with the EPA prior to implementation. These rehabilitation works will be carried out under Condition 10 of the IPC Licence.

The EU's Recovery and Resilience Facility, through the National Recovery and Resilience Programme, is investing up to €108 million in the Enhanced Decommissioning, Rehabilitation and Restoration Scheme (EDRRS) to rehabilitate 33,000 hectares of peatlands over 82 Bord na Móna bogs, previously used for peat extraction for electricity generation. The objectives of the EDRRS are to rehabilitate these peatlands so that the improvements optimise climate, environmental, ecological and hydrological impacts. The EDRRS (now known as the Peatland Climate Action Scheme or PCAS) is the largest programme of bog rehabilitation in the State's history, involving a wide array of engineering and ecology works designed to encourage and accelerate natural processes.[23]Once rehabilitated, the peatlands will include peat forming bogs and a mosaic of wetlands, grasslands, and native woodlands, protecting the storage of 100 million tonnes of carbon, and enhancing biodiversity. The 33,000 hectares targeted in this scheme will deliver over 40% of the CAP23 target.

The decommissioning and rehabilitation work proposed (in accordance with Condition 10 of the IPC Licence) for the bogs within the red line boundary of the subject site are simpler and require less intervention than PCAS works. For example, the rehabilitation works typically involve drain blocking where appropriate, whereas the PCAS works, at the appropriate locations, requires re-profiling of ground-levels of the cutover peat to allow water to pool in cells. See image below as an example of completed PCAS works adjacent to the proposed development.

[23] https://www.bnmpcas.ie

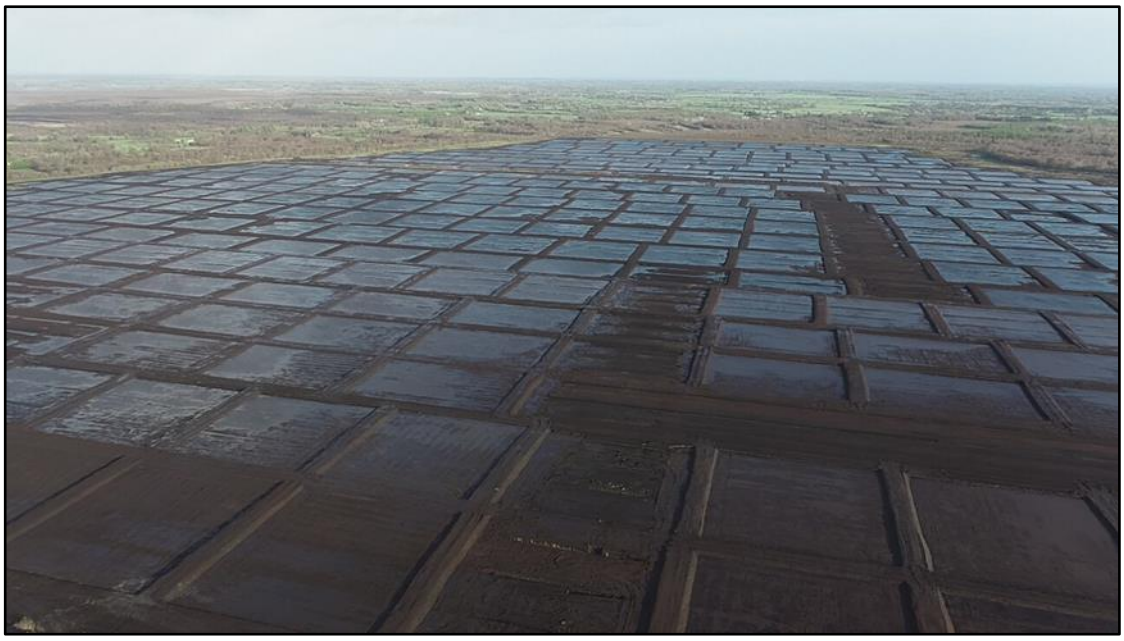


Photo 2-1: PCAS works completed at Carranstown East bog, Ballivor

2.3.3 Benefits of Cutover Peatland Rehabilitation

The key objective of cutover peatland rehabilitation is environmental stabilisation. This involves stabilising the bare peat surfaces, slowing water movement across the bog and trapping mobile silt. Raised bogs need certain types of mosses, collectively known as 'sphagnum', to grow in order for peat to form. In cutaway bogs, where the water chemistry and environmental conditions no longer support the growth of sphagnum, the bogs cannot be restored to peat-forming conditions. These bogs are rehabilitated to form other habitats instead.

In a broad sense cutover peatland rehabilitation will firstly seek to retain water on the site for longer periods, promote revegetation of bare peat areas and reduce the potential for loss of material and carbon through either emission to atmosphere or via surface water discharge.

A number of research papers and reports have been completed over the last decade that have focussed on measurement of the effect of rewetting of peatlands on carbon emissions in the Irish context. Wilson et al published a paper in 2016 (multi-year greenhouse gas balances at a rewetted temperate peatland) that assessed the variation in carbon emissions arising from a former cutover Bord na Mona peatland that had undergone decommissioning and rehabilitation. The paper demonstrated that rewetting had led to a significant reduction in greenhouse gas emissions. It was postulated that under the correct conditions that the site itself would stabilise in the coming decades and may even become similar to intact peatlands in terms of greenhouse gas dynamics.

The Network Monitoring Rewetted and Restored Peatlands/Organic Soils for Climate and Biodiversity Benefits (NEROS) report was published by the EPA in 2018.[24]The report outlined research on rewetting carried out on a range of degraded peatland sites. The list of sites assessed included Blackwater and Bellacorick bogs both of which had undergone industrial peat extraction and both within the Bord na Mona landbank. The report recognised the challenges of rewetting over large landscapes like cutover industrial peat extraction sites. It also recognised that on this type of site there is potential for a mosaic of habitats to form and that not all of those habitats will act as carbon sinks. The report concludes that drained peatlands should be targeted for rewetting as a climate change mitigation strategy.

A recently published research article in Global Change Biology, **Carbon and climate implications of rewetting a raised bog in Ireland, Wilson et al[25]** recognises that the premise of rewetting of drained or degraded peatlands to assist in climate change mitigation has gained considerable traction in recent years underpinned by the growing body of research where the main components of the peatland carbon (C) cycle: carbon dioxide (CO2), methane (CH4), dissolved organic carbon (DOC) have been quantified in a wide range of peatland types along a drainage continuum (natural-drained-rewetted).

The study was located on a raised bog in Moyarwood, Co. Galway of c. 230ha that had been subject to mechanical peat extraction on the margins for decades. The bog had been extensively drained in the 1980's with drainage ditches located every 15m but milled peat extraction was never commenced. In 2012 a rewetting programme was undertaken involving blocking drains with peat dams at regular intervals.

Wilson et al. found in their research that it was clear that rewetting combined with revegetation combined to rapidly switch the study area from a large CO2 source to a small net CO2 sink in year 1, which increased further in years 3–5. The authors postulate that it is probable that the magnitude of the CO2 sink will eventually decline to values similar to those recorded at natural sites.

Other research cited in the article has demonstrated that practical management actions, such as drain blocking, the installation of berms and the construction of peat cells can have a profound effect on peatland C dynamic.

[24] https://www.epa.ie/publications/research/biodiversity/Research_Report_236.pdf.
[25] https://doi.org/10.1111/gcb.16359

It is important to note that irrespective of the mechanism under which the cutover peatland is rehabilitated (either Rehabilitation as required by Condition 10 of the IPC licence or enhanced rehabilitation under PCAS) rewetting forms a key part of the measures implemented on those sites.

2.3.4 Wind Farms and Cutover Peatland Rehabilitation

On-shore wind farm development plays a major role in meeting Ireland's GHG reduction commitments. CAP23 contains a target of 9GW of onshore renewable energy generation from wind development by 2030. Bord na Mona have developed a number of wind farms on cutover peatlands with an installed capacity of over 330MW. Currently an additional 126MW is under construction. The permanent footprint of windfarms across these sites varies between 2 and 4% of each site. Therefore, in excess of 95% of the cutover peatland within the windfarm sites is available for rehabilitation.

Mountlucas windfarm (84MW – 28 Turbines) was developed on cutover peatlands and completed construction in 2014. Rewetting measures as part of rehabilitation were incorporated into the site following construction and the site is now heavily vegetated to the extent that the former peat extraction activity is no longer evident.

Photo 2-2: Aerial Image of Mountlucas wind farm on rehabilitated cutover peatlands (2021)

Cloncreen Wind Farm (75MW- 21 turbines) built by Bord na Móna began delivering energy to the electricity grid in the Autumn of 2022. Similar to the Ballivor group of bogs, the peat source at Cloncreen has been largely exhausted over the years of industrial peat extraction. Since commissioning of the wind farm rehabilitation works have been completed on the land area at Cloncreen that is not occupied by the permanent footprint of the wind farm infrastructure. See Photos 2-3 and 2-4 below.

Photo 2-3: Peat dams installed on cutover bog within the Cloncreen windfarm site

Photo 2-4: Rewetted areas within the Cloncreen wind farm site

The experience across a range of windfarm sites demonstrates that peatland rehabilitation and wind farm development can co-exist successfully. Since the cessation of peat harvesting in 2020 and the increased urgency to develop renewable energy alternatives, it has generally been accepted by policy makers at national, regional and local level that the cutaway bogs present potentially ideal locations for renewable energy infrastructure.

The opportunity to develop and deliver renewable energy infrastructure on land that can function as a carbon store and has the potential to revert to a carbon sink as well as enhance wildlife habitats presents a unique opportunity to meet Ireland climate change and biodiversity enhancement commitments.

2.4 Planning History

This Section sets out the relevant planning history of the Proposed Development site, planning applications in the vicinity of the site and other wind energy applications within the wider area.

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 Development:

1. All planning applications which are within the red line planning application boundary of the current Proposed Development have been identified in Table 2-5 below.
2. A 25 kilometre zone of influence was used from the redline application boundary of the Proposed Development to identify other wind farm sites in the wider area. This EIAR assesses all relevant consented wind farm developments for potential landscape and visual and cumulative affects to arise with the Proposed Development. (Table 2-6 below).
3. Non-wind energy related extant permissions and live applications within c. 1.7km of the wind farm site for development that have not yet been constructed are set out in Appendix 2-4. These permissions/consents are listed in the interests of considering any potential cumulative impacts that could arise. Any permitted development that has been constructed forms part of the baseline conditions considered within the EIAR.

2.4.1 Works within the Wind Farm Site

Planning applications which are recorded as being within the application redline boundary are set out in Table 2-5 below. It is noted that industrial scale peat extraction was permanently ceased by the Applicant within the Ballivor Bog Group in June 2020. Maintenance activities associated with the removal of existing peat stockpiles from the Bog Group and the Applicant's statutory duties to discharge the conditions of its Integrated Pollution Control Licence (IPC) Licence (Ref. P0501-01) from the Environmental Protection Agency (EPA) for the Derrygreenagh Bog Group, which in part comprises the Ballivor Bog Group, remain on-going. The on-going decommissioning and maintenance activities will ensure compliance with the Applicant's extant IPC Licence.

Condition 10 of the IPC licence instructs the Applicant to produce draft peatland rehabilitation plans for each bog of the Derrygreenagh Bog Group, within which the Wind Farm Site Boundary is located, upon cessation of peat extraction. These draft plans will be agreed by the EPA prior to implementation. Please see Appendix 6-6 of this EIAR for the draft Cutaway Bog Decommissioning and Rehabilitation Plans for Ballivor, Bracklin, Carranstown and Lisclogher Bogs.

The Peatland Climate Action Scheme (PCAS) was carried out at Carranstown East, adjacent to the Wind Farm Site Boundary. This form of enhanced peatland rehabilitation which is above and beyond what is required under IPC licence was completed in 2022. Bracklin West, also adjacent to the Wind Farm Site Boundary has been selected for PCAS and it is expected to commence in 2023. This accelerated form of peatland rehabilitation has also been successfully implemented at the recently constructed Cloncreen wind farm.

The PCAS scheme is supported by Government through the Climate Action Fund and Ireland's National Recovery and Resilience Plan administered by the Department of Environment, Climate and Communications (DECC). Please see https://www.bnmpcas.ie/ for details. The National Parks and Wildlife Service (NPWS) acts as the Scheme regulator and there is ongoing engagement with the EPA. This scheme is in addition to the IPC licence requirements and therefore does not form part of the proposed Ballivor Wind Farm application.

A cumulative impact assessment and relevant mitigation measures are set out within each of the chapters of this EIAR.

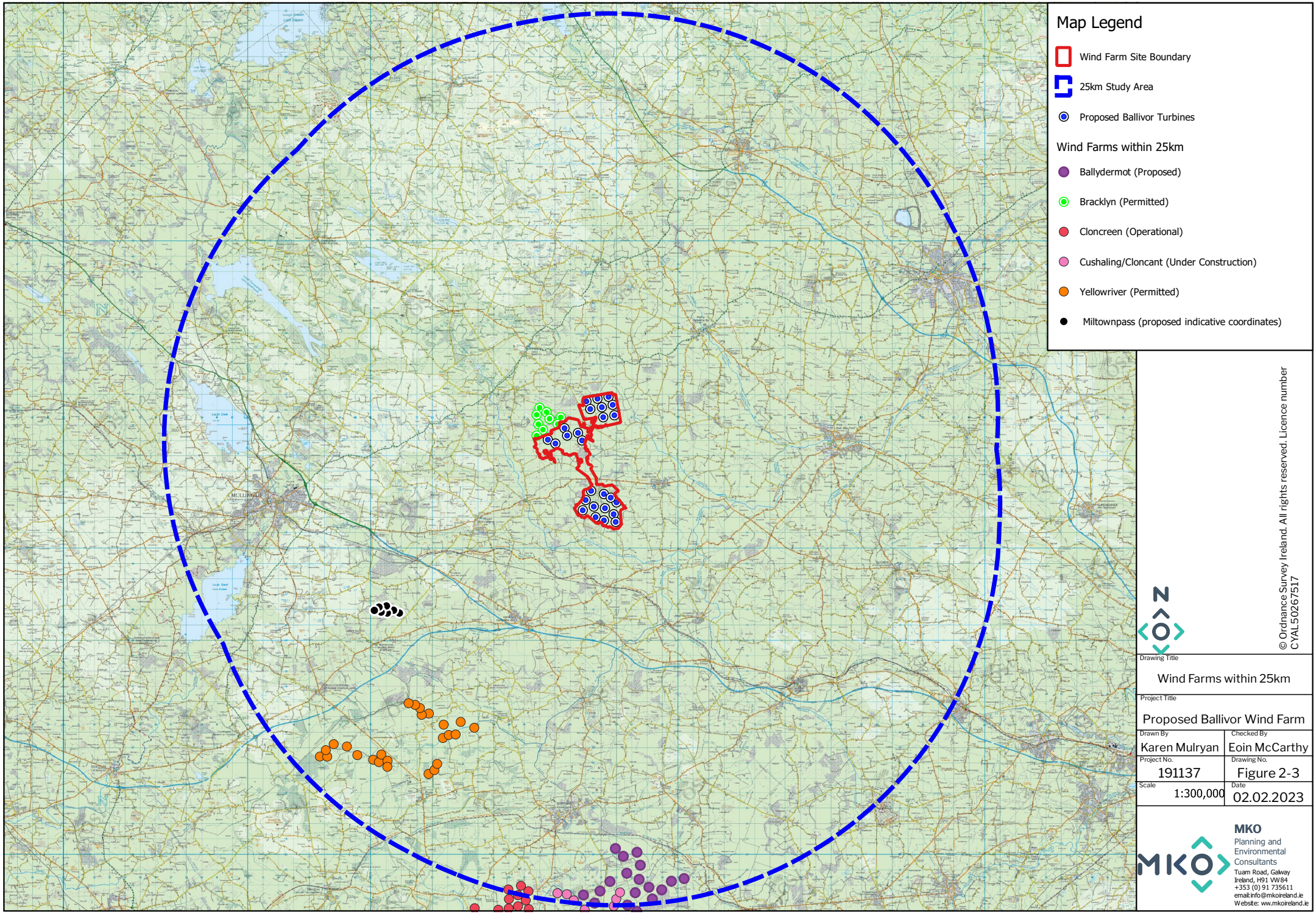
Table 2-5: Applications within the Application Site boundary

Local Authority	Planning Ref.	Lodgement Date	Description	Location	Final grant
Co. Westmeath	156135	20/07/2015	To erect a guyed wind monitoring mast, with instruments, up to 100m in height, at Lisclogher Bog, Lisclogher Great, Co Westmeath. The purpose of the proposed mast is to assess the suitability of the company's adjacent lands for wind farm development	Lisclogher Bog	13/10/2015
Co. Westmeath	166259	28/10/2016	Erect a guyed wind monitoring mast with instruments up to 100m in height. The purpose of the proposed mast is to assess the suitability of the company's adjacent lands for wind farm development.	Lisclogher Bog	25/01/2017
Co. Westmeath	21620	18/11/2021	Retention permission for continued use of an existing Guyed Wind Monitoring Mast with instruments, 100m in height on its lands at Lisclogher Bog, Lisclogher Great, Co. Westmeath for a further period of three years. The purpose of the mast is to assess the suitability of the company's adjacent lands for wind farm development.	Lisclogher Bog	23/02/2022
An Bord Pleanála	311646	13/10/2021	Application for Leave to Apply for Substitute Consent for peat extraction activities.	Ballivor, Carranstown, Bracklin, Lisclogher, and Lisclogher West Bogs	N/A Decision on Leave Application TBC by ABP

2.4.2 Wind Energy Applications Within 25km of the Proposed Development

Relevant planning history of other wind energy projects with the potential for cumulative impacts are considered to be those within c. 25km of the Proposed Development. These are set out in Table 2-5 below. Other wind energy development applications not listed below have either expired or were constructed and form part of the baseline.

Proposed wind farm developments within the cumulative area are also identified in Table 2-6 where information is available via listings on the website of An Board Pleanála (pre-application consultations) or by way of public consultation websites maintained by prospective developers. Where detailed information is not publicly available for certain projects, these are not considered in the cumulative assessment. Fig 2-3 illustrates operational, permitted and proposed windfarms within 25km of the subject site which are considered as part of the cumulative assessment in this EIAR.



Drawing Title
Wind Farms within 25km

Project Title
Proposed Ballivor Wind Farm

Drawn By	Checked By
Karen Mulryan	Eoin McCarthy
Project No.	Drawing No.
191137	Figure 2-3
Scale	Date
1:300,000	02.02.2023

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Table 2-6: Wind Energy Permissions within 25km of the Development Site

Permitted Windfarms within 25km from subject site								
Wind Farm	**Pl. Ref.**	**Applicant**	**Lodgement**	**Description**	**Location**	**Decision**	**Appeal/ABP decision**	**Operational Status**
Bracklyn	PA25M.311565	Bracklyn Wind Farm Limited	05/10/2021	Proposed 9 no turbine wind farm all associated works	Bracklyn, Co. Westmeath (0.5km – 5km)	SID app	Grant 07/07/2022 ABP	No
Yellow River	PA19.PA0032	Greenwind Energy (Wexford) Ltd	28/11/2013	A 10 year permission for 29 turbines with a total height of up to 166m	Derryarkin and other townlands – to the north of Rhode, Co. Offaly (c. 15.5 km southwest)	SID app	Grant 03/06/2014 ABP	No
Cushaling/Cloncant	PL19.306924	Cloncant Renewable Energy Limited	18/03/2020	10-year planning permission with a 30-year operational life. The development will consist of up to 8 (eight) wind turbines. An Environmental Impact Assessment Report (EIAR) and A Natura Impact Statement (NIS) has been prepared in respect of the application	Ballykilleen Shean Kilcumber Cloncant & Cushaling , Edenderry , Co Offaly (24.1km South)	Refuse 21/02/2020 Offaly County Council	Grant 23/09/2020 ABP	Under Construction
Cloncreen	PA19.PA0047	Bord Na Móna Powergen Ltd	27/10/2016	Proposed Cloncreen Wind Farm comprising up to 21 no. Wind Turbines and all associated works	Esker More, Clongarret, Cloncreen, Ballykilleen, Ballynakill, Ballinrath, Rathvilla or Rathclonbrackan, Ballina and Ballingar, County Offaly (24.5km South)	SID Application	Grant 03/05/2017 ABP	Yes

Table 2-7: Proposed Windfarms within 25km of the subject site.

Proposed Windfarms within 25km of subject site in early stage consultation					
Wind Farm	**Pl. Ref.**	**Applicant**	**Description**	**Location**	**Status**
Miltown Pass	N/A	Statkraft	Proposed 7 no. turbines and underground connection to Clonfad Substation (via public consultation website https://milltownpasswindfarm.ie/ accessed on 2023.02.23)	Miltown Pass, Co. Westmeath (c. 17 km southwest)	Public Consultation commenced
Knockanarragh	N/A	Statkraft	Up to 8 no Turbines – via. public consultation website https://knockanarraghwindfarm.ie/ accessed on 2023.02.23 **No detail on turbine locations or dimensions publicly available**	Newtown, Carnybrogan, Cavestown and Rosmead Co. Meath and Co. Westmeath. (c. 10km northwest)	Public Consultation commenced
Ballydermot	ABP 310143-21	Bord na Móna Powergen Ltd.	Construction of a wind energy development comprising approximately 50-55 no. wind turbines.	Ballydermot and other townlands, Co. Offaly and Lullybeg and other townlands, Co. Kildare.	Pre-Application Consultation ongoing

2.4.3 Applications within the Vicinity of the Wind Farm Site

There have been a number of planning applications (i.e., non-wind farm applications) lodged within the vicinity of the Proposed Development. A general search area of c. 1.7km from individual turbines was identified for housing, agricultural and related developments. This search area is considered reasonable and was informed by the nature and scale of the Proposed Development and the potential impact on the surrounding environment (for example the reach of Shadow Flicker from individual turbines). Applications within this area were collated following a review of the Meath and Westmeath County Council planning portals. Records of An Board Pleanála and the Department of Agriculture, Forestry and the Marine websites were also searched for other relevant planning applications and licences. The planning search results are found in Appendix 2-4 of this EIAR.

Applications within the vicinity of the proposed wind farm are predominately for the development of the following:

- Quarrying,
- Agriculture,
- Forestry,
- Renewable energy (including the permitted Bracklyn Wind Farm),
- Private turbary
- One off housing

2.4.4 Applications in the Wider Area

A search of relevant planning applications was carried out in the wider area (>1.7km) of the Proposed Development which are considered for the cumulative assessment of the Proposed Development. The search area was determined having consideration for relevant disciplines which form part of this EIAR. For example, the cumulative search area for matters related to hydrology and hydrogeology (Chapter 9 of this EIAR) is determined by hydrolgical catchment area, while cumulative impacts related to landscape and visual impact is determined by the Zone of Theoretical Visibility as described in Chapter 13 of this EIAR. Relevant applications are listed in Appendix 2-4 of this EIAR.

2.5 Scoping and Consultations

2.5.1 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 an 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 Development and its potential effects on the environment and provides initial feedback in the early stages of the project, when project alterations are still easily incorporated into the design. 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 application site and the Proposed Development, was prepared by McCarthy Keville O'Sullivan Ltd. (MKO) and circulated in May 2020. MKO requested the comments of the relevant personnel/bodies in their respective capacities as consultees with regards to the scope and preparation of the EIAR.

2.5.2 Scoping Responses

Table 2-7 lists the responses received from the bodies to the scoping document circulated in May 2020. Copies of all scoping responses received are included in Appendix 2-1 of this EIAR. Table 2-8 overleaf presents the key points from the scoping responses received and identifies where such points have been addressed in this EIAR. If further responses are received, the comments of the consultees will be considered in the construction, operation, and decommissioning of the Proposed Development in the event of a grant of planning permission. The recommendations of the consultees have informed the scope of the assessments undertaken and the contents of the EIAR.

Table 2-7 Scoping Responses

	Consultee	First Contact	Response	Contacted with Final Turbine Locations	Response on Final Turbine Locations
1	2rn (RTÉ Transmission Network Ltd.)	Emailed 07.05.20	Responded 08.05.20 Requested turbine dimensions and locations and signed agreement with the developer	07.05.21	No issues with final turbine layout 07.05.21
2	An Taisce	posted	No Response	14.05.21	No Response
3	Broadcasting Authority of Ireland (BAI)	Emailed 07.05.20	Responded 11.05.20 No issues	07.05.21	Responded 10.05.21 No issues
4	Bat Conservation Ireland	Posted 08.05.20	No Response	14.05.21	No Response
5	BirdWatch Ireland	Emailed 07.05.20	No Response	07.05.21	No Response
6	BT Communications Ireland	Emailed 07.05.20	Responded 07.05.20- no issues	07.05.21	No Response
7	Butterfly Conservation Ireland	Emailed 08.05.20	No Response	07.05.21	No Response
8	Commission for Communications Regulation	Emailed 22.06.20	Operator list provided	NA	NA

9	Commission for Regulation of Utilities Water and Energy	Emailed 07.05.20	No Response	07.05.21	No Response
10	Department of Agriculture, Food and the Marine	Emailed 07.05.20	Responded 28.05.2020-	11.05.21	No Response
11	Development Applications Unit (NPWS/NMS)	Emailed 7.5.20	Responded 26.06.2020- Nature Conservation	11.05.21	No Response
12	Department of Communications, Climate Action & Environment	Emailed 7.5.2020	Responded 18.05.20 with GSI response- who were emailed separately 12.02.2021	07.05.21	No Response
13	Department of Defence	Emailed 7.5.2020	No Response	07.05.21	Responded 25.05.21-
14	Department of Transport, Tourism and Sport	Posted 08.05.20	Responded 08.05.20 requesting electronic copy- no further response	11.05.21	No Response
15	Eastern and Midland Regional Assembly	Emailed 7.5.20	No Response	05.07.21	No Response
16	Eastern River Basin District (RBD)	Emailed 7.5.2020	No Response	05.07.21	No Response
17	Eirgrid	Emailed 7.5.2020	No Response	05.07.21	No Response

18	Eir/Openeir	Emailed 15.5.20 Openeir- 29.09.20	Responded 15.05.20- Eir potential links Openeir- one radio link but likely to be removed in 1-2 years	05.07.21	No issues 14.05.2021
19	EMR Integrated Solutions	Emailed 07.05.20	Responded 15.05.2020– no issues	05.07.21	Responded 05.07.21 No issues
20	Environmental Protection Agency	Emailed 08.05.20	Responded 27.08.20 with responses from HSE, DAFM and Failte Ireland	05.07.21 emailed EPA and individual depts	Response received from DAFM 12.05.21. Response received from Failte Ireland 10.05.21 acknowledging update
21	ESB Telecoms	Emailed 08.05.20	Responded 10.07.2020 – no issues	05.07.21	Responded 14.05.2021 No issues
22	Fáilte Ireland	Emailed 08.05.20	Responded 18.05.2020	07.05.21	Response received from Failte Ireland 10.05.21 acknowledging update
23	Geological Survey of Ireland	Emailed 07.05.20	Responded 18.05.2020	05.07.21	Responded 10.05.2021- no further comments to make
24	Health Service Executive	Posted 08.05.20	No Response	11.05.21	No Response

25	Imagine Communications Group	Emailed 08.05.20	Responded 11.05.2020 and 18.05.2021 Potential links	05.07.21	Responded 09.06.21 No issues once buffer zones are maintained.
26	Inland Fisheries Ireland	Emailed 08.05.20	No Response	11.05.21	Response received through DECC 19.05.2021
27	Irish Aviation Authority	Emailed 08.05.20	Responded 08.05.2020 requesting more information on locations	05.07.21	12.05.2021- no issues - response
28	Irish Peatland Conservation Council	Emailed 8.5.20	No Response	05.07.21	No Response
29	Irish Parachute Club	Posted 08.05.20	No Response	Posted 14.05.21	No Response
30	Irish Red Grouse Association	Posted 08.05.20	No Response	Posted 14.05.21	No Response
31	Irish Raptor Study Group	Emailed 8.5.20	No Response	05.07.21	No Response
32	Irish Sports Council (Sports Council	Posted 08.05.20	Posted 08.05.20	Posted 14.05.21	No Response
33	Irish Water	Emailed 8.05.20	Email reply 19.05.2020	05.07.21	Clarification of locations of Irish Water Assets
34	Irish Water- Water Supply Project	Emailed 07.05.20	Responded 17.07.20 - Site is over 30km from their project - no issues	N/A	N/A

35	Irish Wildlife Trust	Emailed 07.05.20	Responded 12.05.20 stating they have no capacity to respond to scoping requests for developments at this time	05.07.21	No Response
36	Meath County Council - Planning Department/ Environment Department/ Roads Department/ Heritage Officer	Emailed 8.5.20	Scoping response issued 01.10.2020 along with Minutes from pre-application meeting which was held June 28th 2020	Response - Waiting for SID determination	N/A
37	Office of Public Works	posted 08.05.20	No Response	Posted 05.07.21	No Response
38	Ripple Communications	Emailed 8.5.20	Responded 09.07.2020 - no issues	05.07.21	No Response
39	Eastern River Basin District	Emailed 07.05.20	No Response	11.05.21	No Response
40	Sustainable Energy Authority of Ireland	posted 08.05.20	No Response	Posted 14.05.21	No Response
41	TETRA Ireland Communications Ltd.	Emailed 8.5.2020	Responded 15.05.2020	05.07.21	Responded 19.05.21 - No issues
42	TG4	Posted 08.05.20	No Response	Posted 14.05.21	No Response
43	The Arts Council	Posted 08.05.20	No Response	Posted 14.05.21	No Response
44	The Heritage Council	Emailed 08.05.20	No Response	Emailed 07.05.21	No Response

45	Three Ireland	Emailed 8.5.2020	Responded 08.05.2020 requesting more details regarding turbine dimensions	Emailed 07.05.21	Responded 11.05.21 No issues
46	Transport Infrastructure Ireland	Emailed 8.5.2020	Responded 12.06.2020 - Refer to Appendix 2.1	Emailed 07.05.21	Responded 17.05.21 - no further comments to add
47	Viatel Ireland Ltd	Emailed 8.5.20	Responded 22.05.2020 - no issues	Emailed 07.05.21	Responded 18.05.2021 - no issues
48	Virgin Media Ltd	Emailed 8.5.20	No Response	Emailed 07.05.21	Responded 18.05.2021 - no issues
49	Vodafone Ireland Ltd.	Emailed 8.5.20	Responded 08.05.2020, buffers requested	Emailed 07.05.21	Responded 12.05.2021 - no issues
50	Waterways Ireland	Emailed 08.05.2020	Responded 14.05.2020 stating these lands were not under their jurisdiction therefore no comment to make	N/A	N/A
51	Westmeath County Council - Planning Department/ Environment Department/ Roads Department/ Heritage Officer	Emailed 08.05.20	Responded 15.05.2020 asking if it was a formal scoping request. Responded 18.05.2020 asking for GIS data for the site boundary	Response - Waiting for SID determination	N/A
52	Irish Rail	Emailed 22.06.20	Responded 23.10.20 stating no interference would occur	N/A	N/A
53	ENET	Emailed 08.05.20	Responded 23.06.2020 - Telecommunication Design buffers requested	Emailed 07.05.21	Responded 11.05.21 No issues

Table 2-8 Scoping Responses Received and Relevant EIAR Section

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
1	DAU (includes National Parks & Wildlife Service, and National Monuments Service)	**Nature Conservation** 1. Cumulative impacts- this appears to suggest that the only cumulative impacts which will be considered are those with other wind farms within 20km of the proposed site. This would not adequately assess the potential impacts on wide ranging species especially those in migration such as geese and swans. Also cumulative effects should include more than just multiple wind farm effects. The cumulative effects of the Proposed Development with other types of projects should be considered. The indirect effects of the demands for resources to supply and build the development and the impacts these may have elsewhere should be assessed. 2. Interactions with the Proposed Development and the on-going peat extraction activities at the sites and any impacts arising should be considered. Also detailed rehabilitation plans should be prepared for the peatlands concerned within and adjacent to the proposed site and the potential impacts of the Proposed Development on rehabilitation of the peatlands should be considered and assessed in an EIAR. Hydrological changes which may prevent future rehabilitation of suitable areas of the site to peat forming habitat are of particular concern. 3. In deciding on the proposed layout of the Proposed Development, in addition to those proposed, adequate buffers should also be placed around important habitats and species in the locations identified in flora and fauna studies. 4. The EIAR should adequately address the potential impacts to determine local and international bird migration over the proposed site, particularly nocturnal migrants. In this regard, technological methods, for example, radar and sonar surveys, as outlined in https://www.nature.scot/sites/default/files/2017-09/Guidance%20note%20-	Cumulative impacts with all various developments not exclusively wind are assessed in all chapters. List of developments in Chapter 2 Background	Chapter 2: Background Chapter 6 Biodiversity (includes bat survey report) Chapter 7 Ornithology Chapter 8 Geology Chapter 9 Hydrogeology Appendix 4.3 CEMP

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
		%20Guidance%20on%20methods%20for%20monitoring%20bird%20populations%20at%20onshore%20windfarms.pdf should be carried out. 5. Passive bat surveying at height should be undertaken to document highflying species such as Leisler bat. Risk to bats in terms of collision and barotrauma should be addressed. 6. The EIAR should include a robust post development mitigation monitoring plan.		Chapter 6 Biodiversity (includes bat survey report) Chapter 16 Mitigation and Monitoring
2	Department of Food, Agriculture and the Marine (DFAM)	Felling and forestry recommendations – Outlined in full in Appendix 2.1	Comments noted - felling licence not required for application	Chapter 6 Biodiversity (includes bat survey report) Chapter 7 Ornithology
3	EPA	Scope and level of detail to be included in the environmental impact assessment report should as a minimum: (i) identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of a project on each of the factors listed in Article 3 of the EIA Directive; (ii)address the matters raised in the responses received from the authorities detailed above; (iii)have regard to the requirements of the draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, as appropriate; (iv)have regard to the relevant topics contained in the EPA's Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) September 2003; (v)satisfy the requirements of the EIA Directive. EPA also issued the HSE, Failte Ireland and DAFM responses	Direct and indirect significant effects of a project as listed in Article 3 of the EIA Directive included; (Scoping responses considered Regard given to the requirements of the draft Guidelines on the information to be contained in Environmental Impact Assessment Reports (2017) and EPA's Advice Notes on Current Practice (in the preparation of Environmental Impact Statements.	All Chapters

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
4	Fáilte Ireland	Refer to Fáilte Ireland's Guidelines for the Treatment of Tourism in an EIA. These guidelines are non-statutory and act as supplementary advice to the EPA EIAR Guidelines outlined in section 2.	The noted document has been considered in the preparation of the EIAR.	Chapter 5: Human Beings
5	Geological Survey Ireland	Geoheritage: Their records show that there are no audited CGSs in the vicinity of the proposed road improvement study areas. Our Aggregates Potential Map records crushed rock aggregate potential as 'moderate potential' and granular aggregate potential of 'low potential' in the wider vicinity of the project and consideration to aggregate potential sterilisation should be included as part of the planning process. The Active Quarries database shows a number of active quarries of both rock and sands and gravels in the wider study area. The landslide susceptibility mapping for County Meath / Westmeath shows that the study area is generally classified as low susceptibility. We welcome the inclusion of a geotechnical peat assessment as part of the EIAR process. We recommend that geohazards be taken into consideration, especially when developing areas where these risks and susceptibility are prevalent, and we encourage the use of our data when doing so. Our data shows no recorded landslides in the study area Recommend using National Aquifer, Vulnerability and Recharge maps. Recommend using GWFlood tools, Review datasets of bedrock and subsoils geological mapping.	Geohazards considered Peat and spoil management plan included Peat stability assessment undertaken GSI Map Viewer and databases consulted	Chapter 8: Geology and Soils Chapter 9: Hydrology and Hydrogeology

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
		Should development go ahead. GSI request copy of all reports detailing site investigations.		
6	Health Service Executive	1) Recommendation that a number of documents should be considered in preparing the EIAR. 2) Recommendations surrounding public consultations. 3) EIAR should detail information surrounding decommissioning including eventual fate of materials. 4) EIAR should include map and description of proposed turbine locations. 5) The Proposed Development should be assessed with a view of including health gains. 6) Recommendations surrounding noise assessment within the EIAR. 7) Recommend that a shadow flicker assessment is carried out. 8) Measures surrounding air quality during construction works are recommended. 9) Drinking water sources should be identified. Any potential impacts should be assessed. 10) Assessment of current ground stability and all proposed mitigation measures should be detailed in the EIAR. 11) EIAR should detail the location of on site facilities. 12) HSE South Emergency Management function does not have any specific observations to make with respect to this application but set out several recommendations.	1) The noted documents have been considered in the preparation of this EIAR. 2) The applicant team have carried out detailed public consultations as part of the proposals. 3) Decommissioning considered in chapter. 4) Locations included. 5) Health gains included in Chapter 5 and Chapter 10 6) Noise assessed in Chapter 11. 7) Shadow flicker assessed in Chapter 5. 8) Construction mitigation considered in EIAR. 9) Water assessed in EIAR Chapter 9. 10) Ground stability assessed in EIAR Chapter 8 11) detail the location of on site facilities Chapter 4	Chapter 2: Background Chapter 4: Description Chapter 2: Background; Chapter 5: Human Beings Chapter 8: Geology and Soils Chapter 9: Hydrology and Hydrogeology Chapter 10 Air and Climate Chapter 11: Noise Appendix 4.3 CEMP
7	Department of Defence	1. All turbines or tall structures, should be illuminated by high intensity obstacle lights that will allow the hazard to be identified and avoided by aircraft in flight. 2. Obstruction lights used should be incandescent or of a type visible to Night Vision Equipment. Obstruction lighting fitted to obstacles must emit light at the	The DOD lighting requirements will be agreed in writing with the DOD prior to the commencement of	Chapter 14: Material Assets

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
		near Infra-Red (IR) range of the electromagnetic spectrum specifically at or near 850 nanometres (nm) of wavelength. Light intensity to be of similar value to that emitted in the visible spectrum of light. 3. Due to the nature of flight operations by the Irish Air Corps the above mentioned are separate to any ICAO and IAA lighting requirements.	development should the Proposed Development receive a grant of planning permission.	
8	Irish Aviation Authority	Based on the information provided and the turbines appear to be positioned in excess of 10km radius from Athboy Aerodrome, the Authority has no specific requirements for integration into the Environmental Impact Assessment Report. Should this proposal proceed to a formal planning application, the Authority will make the general observations that in the event of planning consent being granted, the applicant should be conditioned to contact the Irish Aviation Authority to: (1) agree an aeronautical obstacle warning light scheme for the wind farm development, (2) provide as-constructed coordinates in WGS84 format together with ground and tip height elevations at each wind turbine location and (3) notify the Authority of intention to commence crane operations with at least 30 days prior notification of their erection.	The IAA lighting requirements will be agreed in writing with the IAA prior to the commencement of development should the Proposed Development receive a grant of planning permission.	Chapter 14: Material Assets
9	Irish Water	Does not have the capacity to reply to individual projects. Suggested scope in relation to water services set out, which is not project specific. It also notes: 1) Irish Water records indicate the presence of existing water mains within the Proposed Development and proximate to the proposed site boundary which may be impacted by the Proposed Development serving Mullingar Regional Public Water Supply. 2) Stoneyford River Intake for Ballivor Public Water Supply is approximately 4km South East of the proposed site boundary. There is hydrological connectivity between the Proposed Development and a network of tributary rivers feeding into Stoneyford river upstream of IW drinking water source. The	Considered in Chapter 9: Hydrology and Hydrogeology impact assessment	Chapter 9: Hydrology

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
		groundwater is hydrologically connected and of low/moderate vulnerability. Any risk to the Ballivor Public Water Supply and potential negative impact on the water quality from surface and ground water quality through the run-off and infiltration of silt, hydrocarbons, cementitious material, detergent, sewage and other pollutants during the construction, operational and decommissioning phase of the development will need to be mitigated		
10	Transport Infrastructure Ireland	General guidance only set out. The developer should have regard to: 1. As outlined in the Spatial Planning and National Roads Guidelines, it is in the public interest that, in so far as is reasonably practicable, the national road network continues to serve its intended strategic purpose. The EIAR should identify the methods/techniques proposed for any works traversing/in proximity to the national road network in order to demonstrate that the development can proceed complementary to safeguarding the capacity, safety and operational efficiency of that network. 2. In relation to the Proposed Development site, the scheme promoter should note locations of existing and future national road schemes and develop proposals to safeguard proposed road schemes. Consultations should be had with the relevant Local Authority/National Roads Design Office with regard to locations of existing and future national road schemes. 3. In relation to grid connection and cable routing, proposals should be developed to safeguard proposed road schemes as TII will not be responsible for costs associated with future relocation of cable routing where proposals are catered for in an area of a proposed national road scheme. In that regard, consideration should be given to routing options, use of existing crossings, depth of cable laying, etc. In the context of existing national roads, alternatives to the provision of cabling along the national road network, such as alternative	The methods/techniques to be employed are set out in full in the EIAR at Chapter 4 Description, Chapter 14: Material Assets, Chapter 9: Hydrology and Hydrogeology, and in the CEMP included in the EIAR. Pre-Application engagement with Meath and Westmeath County Council. Addressed in the above-noted EIAR Chapters and in the accompanying planning drawings.	Chapter 4: Material Assets Chapter 9: Hydrology and Hydrogeology Appendix 4.3 CEMP Chapter 2: Background

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
		routing or the laying of cabling in private lands adjoining the national road, should be considered in the interests of safeguarding the investment in and the potential for future upgrade works to the national road network. The cable routing should avoid all impacts to existing TII infrastructure such as traffic counters, weather stations, etc. and works required to such infrastructure shall only be undertaken in consultation with and subject to the agreement of TII, any costs attributable shall be borne by the applicant/developer. The developer should also be aware that separate approvals may be required for works traversing the national road network. 4. Clearly identify haul routes proposed and fully assess the network to be traversed. Separate structure approvals/permits and other licences may be required in connection with the proposed haul route and all structures on the haul route should be checked by the applicant/developer to confirm their capacity to accommodate any abnormal load proposed. 5. Where appropriate, subject to meeting the appropriate thresholds and criteria and having regard to best practice, a Traffic and Transport Assessment (TTA) be carried out in accordance with relevant guidelines, noting traffic volumes attending the site and traffic routes to/from the site with reference to impacts on the national road network and junctions of lower category roads with national roads. TII's TTA Guidelines (2014) should be referred to in relation to Proposed Development with potential impacts on the national road network. The scheme promoter is also advised to have regard to Section 2.2 of the TII TTA Guidelines which addresses requirements for sub-threshold TTA. 6. TII Standards should be consulted to determine the requirement for Road Safety Audit (RSA) and Road Safety Impact Assessment (RSIA).	Chapter 3 of the EIAR contains an assessment of alternatives. Any approvals/permits/licences required will be obtained. Refer to Chapter 14: Materials Assets of the EIAR. Please refer to Chapter 14 for a Traffic Assessment A RSA and RSIA have not been undertaken but will be undertaken as part of the detailed design stage. Noted.	Chapter 3: Reasonable Alternatives Chapter 14: Material Assets Chapter 14: Material Assets

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
		7. Assessments and design and construction and maintenance standards and guidance are available at TII Publications that replaced the NRA Design Manual for Roads and Bridges (DMRB) and the NRA Manual of Contract Documents for Road Works (MCDRW). 8. The developer, in conducting Environmental Impact Assessment, should have regard to TII Environment Guidelines that deal with assessment and mitigation measures for varied environmental factors and occurrences. In particular: a) 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 (National Roads Authority, 2006), b) The EIAR should consider the Environmental Noise Regulations 2006 (SI 140 of 2006) and, in particular, how the development will affect future action plans by the relevant competent authority. The developer may need to consider the incorporation of noise barriers to reduce noise impacts (see Guidelines for the Treatment of Noise and Vibration in National Road Schemes (1st Rev., National Roads Authority, 2004))	Noted. Matters relating to air quality are assessed at Chapter 10 of the EIAR Noise is addressed in full at Chapter 11 of the EIAR	Chapter 10: Air and Climate Chapter 11: Noise and Vibration
11	EIR/Openeir	Requested a set back from links	Set back included in layout design.	Chapter 14: Material Assets
12	Tetra	Requested a set back from mast	Set back included in layout design.	Chapter 14: Material Assets
13	Imagine Networks Services	Requested a set back from links	Set back included in layout design.	Chapter 14: Material Assets

No.	Consultee	Response	Action Required	Discussed within EIAR (where applicable)
14	RTE/2RN	Requested a set back from links and a Protocol signed between 2rn and the Developer should the site go ahead to cover interference to DTT viewers.	Set back included in layout design	Chapter 14: Material Assets
15	Enet Telecommunications	Requested a set back from links	Set back included in layout design.	Chapter 14: Material Assets
16	Three Ireland	Requested a set back from links	Set back included in layout design.	Chapter 14: Material Assets
17	Vodafone Ireland Ltd	Requested a set back from links	Set back included in layout design.	Chapter 14: Material Assets

2.5.3 Other Consultations

2.5.3.1 Pre-Planning Meetings

2.5.3.2 Meath County Council

Separate pre-application consultations were held virtually with Meath and Westmeath County Councils' Planning and Environmental Departments between July and October 2020 to discuss the general premise of the Proposed Development, the Applicant's approach for preparing the planning application and to understand the Meath and Westmeath County Councils' requirements in terms of the technical content of any future planning application for the same. These meetings are outlined below in the interest of clarity:

Meath County Council (28th July 2020) & Westmeath County Council (23rd July 2020)

The following were in attendance at the pre-application consultation with Meath County Council on the 28th June 2020.

- Meath County Council
  - F. O'Donnell (Planning Department – Executive Planner)
  - J. McGarvey (Transportation Section)
  - D. Keyes (Environment Section - Flooding)
  - L. Guinan (Heritage Officer)
- Project Team
  - Grainne Ryan (Bord na Móna)
  - Caitriona Carter (Bord na Móna)
  - Jimmy Green (MKO)
  - Karen Mulryan (MKO)

The following were in attendance at the pre-application consultation with Westmeath County Council on the 23rd June 2020.

Westmeath County Council

- P. Hanlon (Planning Department – Senior Executive Planner)

Project Team

- Grainne Ryan (Bord na Móna)
- Caitriona Carter (Bord na Móna)
- Jimmy Green (MKO)
- Karen Mulryan (MKO)

At the time of these initial pre-application consultations, the indicative description of the Proposed Development was as follows:

> "The proposed wind energy development comprises between 29 no. and 35 no. wind turbines and all associated works, including: internal access roads and entrance(s), 110 kV substation and wind farm control buildings, borrow pits, electrical cabling for grid connection, temporary construction compounds and a permanent anemometry mast. Wind farm site cabling, including connection to the on-site 110 kV substation, will be laid underground."

The agenda items discussed with Meath and Westmeath County Councils over the duration of the pre-application consultations have been set out below:

1. Site Location

2. Site Selection
3. Wind Farm Design Process, Turbine Delivery, Grid Connection
4. Policy Context
5. Strategic Infrastructural Development and On-going Planning Consultations
6. Public Engagement and Consultation
7. Environmental Impact Assessment:
   a. Scoping and Consultation
   b. Assessments, Modelling, Surveys, Site Investigations
   c. EIAR
8. Any Other Business

Meath County Council and Westmeath County Council emphasised during these discussions that any forthcoming application should suitably address the issue of Appropriate Assessment and Environmental Impact Assessment (with particular reference to Traffic and Transportation, Cultural Heritage, Ecology and Landscape and Visual Impacts) and should incorporate a Construction and Environmental Management Plan (CEMP). It was acknowledged by the Project Team that any future planning application for wind energy infrastructure at this site will be prepared with due regard to emerging renewable energy policies and objectives as part of the Meath County Development Plan 2021-2027 and Westmeath County Development Plan 2021-2027 review processes.

Meath County Council (13th October 2020) & Westmeath County Council (22nd October 2020)

Following the pre-application consultations with Meath and Westmeath County Councils in July 2020, the Project Team completed further community consultation within the local area (as described in Section 3.3.4.3 below) and developed a draft site layout for the proposed Ballivor Wind Farm on the basis of 26 no. wind turbines with a maximum overall blade tip height of up to 200m and all associated works, including: access roads and entrance(s), a 110 kV substation, borrow pits, electrical cabling for grid connection, temporary construction compounds and an anemometry mast. It was therefore considered beneficial to re-engage with Meath and Westmeath County Council to provide an overall update on the project having regard to these consultation events, the prepared draft wind farm site layout and to discuss any technical considerations concerning the same.

The following were in attendance at the pre-application consultation with Meath County Council on the 13th October 2020:

- **Meath County Council (13th October 2020)**
  - F. O'Donnell (Planning Department – Executive Planner)
- **Project Team**
  - Grainne Ryan (Bord na Móna)
  - Caitriona Carter (Bord na Móna)
  - Jimmy Green (MKO)
  - Karen Mulryan (MKO)

The agenda items discussed with Meath County Council over the duration of the pre-application consultation have been set out below:

1. *Presentation of Initial Draft Wind Turbine Layout*
2. *Progress Update: Haul Route Assessment*
3. *Wind Farm Design Process, Turbine Delivery, Grid Connection*
4. *Progress Update: Strategic Infrastructural Development and On-going Planning Consultations*
5. *Progress Update: Public Engagement and Consultation*
6. *Review Meath Scoping Response - Pre-Planning Consultation (28th July 2020)*
7. *Progress Update: Environmental Impact Assessment*
8. *Any Other Business*

The following were in attendance at the pre-application consultation with Westmeath County Council on the 22nd October 2020:

- **Westmeath County Council (22nd October 2020)**
  - P. Hanlon (Planning Department – Senior Executive Planner)
  - S. Reilly (District Engineer)
  - J. Deane (Environmental Section – Senior Engineer)

- **Project Team**
  - Caitriona Carter (Bord na Móna)
  - Jimmy Green (MKO)
  - Karen Mulryan (MKO)

The agenda items discussed with Westmeath County Council over the duration of the pre-application consultation have been set out below:

1. *Presentation of Initial Draft Wind Turbine Layout*
2. *Progress Update: Haul Route Assessment*
3. *Wind Farm Design Process, Turbine Delivery, Grid Connection*
4. *Progress Update: Strategic Infrastructural Development and On-going Planning Consultations*
5. *Progress Update: Public Engagement and Consultation*
6. *Progress Update: Environmental Impact Assessment*
7. *Any Other Business*

2.5.3.3 Strategic Infrastructural Development Determination (ABP-307471-20)

The Project Team held a virtual Pre-Application Consultation with An Bord Pleanála ('the Board') on the 21st September 2020 (ABP-307471-20), as provided for under Section 37B of the Planning and Development Act 2000 (as amended). The key aim for this consultation discussion was to introduce the proposed Ballivor Wind Farm to the Board and to ensure that the Board has sufficient information to inform their determination of whether the proposed wind farm is or is not Strategic Infrastructure Development (SID).

The following were in attendance at the pre-application consultation with the Board on the 21st September 2020.

- **An Bord Pleanála**
  - C. Kellett (Assistant Director of Planning)
  - K. McBride (Senior Planning Inspector)
  - N. Meehan (Executive Officer)
- **Project Team**
  - Grainne Ryan (Bord na Móna)
  - Caitriona Carter (Bord na Móna)
  - Sean Creedon (Bord na Móna)
  - Jimmy Green (MKO)
  - Karen Mulryan (MKO)
  - Jordan Baxter (MKO)

The agenda items discussed over the duration of the pre-application consultation have been set out below:

1. *Site Selection*
2. *Site Location*
3. *Planning Policy Context*

4. *Wind Farm Design Process*
5. *Scoping and Pre-Application Consultation*
6. *Public Consultation*
7. *Environmental Impact Assessment Report*
8. *Strategic Infrastructural Development Criteria*
9. *Any Other Business*

A second virtual pre-application consultation was held with the Board on the 7th September 2021 to provide an update on the proposed Ballivor Wind Farm with regard to the environmental surveys and assessments undertaken since September 2020 and the progressing site layout. Although the optimal site layout of the proposed wind farm was still being finalised and environmental surveys on-going, the Project Team could confirm that the wind farm will comprise 26 no. wind turbines and would have a total Maximum Export Capacity (MEC) in the range of 125MW – 155MW. The siting of on-site infrastructure, as shown within the progressing layout, was informed by the potential constraints identified on-site by the on-going environmental surveys.

The following were in attendance at the pre-application consultation with the Board on the 7th September 2021.

- **An Bord Pleanála**
  - C. Kellett (Assistant Director of Planning)
  - K. McBride (Senior Planning Inspector)
  - K. Somers (Executive Officer)
- **Project Team**
  - Brigette Priestley (Bord na Móna)
  - Caitriona Carter (Bord na Móna)
  - Sean Creedon (Bord na Móna)
  - Jimmy Green (MKO)
  - Karen Mulryan (MKO)
  - Jordan Baxter (MKO)

The agenda items discussed over the duration of the pre-application consultation have been set out below:

1. *Summary of Planning Consultations to Date*
2. *Ballivor Wind Farm Design and Assessment Update*
3. *On-going Public Consultation on Project*
4. *Derryadd Judgment*
5. *Any Other Business*

An Bord Pleanála issued a determination on the 04/04/2022 confirming that it is of the opinion that the Proposed Development falls within the scope of paragraphs 37A(2)(a)(b) and (c) of the Act and decided that the Proposed Development would be Strategic Infrastructure Development.

2.6 Cumulative Impact Assessment

The EIA Directive and associated guidance documents state that as well as considering any indirect, secondary, transboundary, short-, medium-, and long-term, permanent and temporary, positive and negative effects of the project (all of which are considered in the various chapters of this EIAR), the description of likely significant effects should include an assessment of cumulative impacts that may arise. 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.

2.6.1 Methodology for the Cumulative Assessment of Projects

The EIA Directive includes a requirement to consider '*a cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources*.' The methodology for the cumulative assessment has been informed by the relevant Guidance documents (as set out in Section 2.2 and throughout this EIAR), and by the nature and scale of the Proposed Development.

The potential cumulative impact of the Proposed Development and other relevant developments has been carried out with the purpose of identifying what likely significant effect the Proposed Development will have on the surrounding environment when considered cumulatively and in combination with relevant permitted, proposed, and constructed projects in the vicinity of the proposed site.

The cumulative impact assessment of projects has three principle aims:

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

Assessment material for this cumulative impact assessment was compiled on the relevant developments within the vicinity of the Proposed Development. 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. Draft plans relating to the rehabilitation of cut-over bog as part compliance with the conditions of the IPC licence were provided by the Applicant and included in Appendix 6-6 of this EIAR.

2.6.2 Projects Considered in Cumulative Assessment

The projects considered in relation to the potential for cumulative impacts and for which all relevant data was reviewed (e.g. individual EIS/EIAR's, layouts, drawings etc) include those discussed previously above in Section 2.3 and all relevant associated works. Each individual chapter will assess the effects of the Proposed Development in combination with these other projects which have been further detailed below.

2.6.2.1 Other Wind Farms

There are a number of other wind farm developments located within a 25 kilometre radius of the Proposed Development site. The other wind farm developments have been listed and included under Section 2.3.2 of this chapter of the EIAR. The other wind farm developments have been considered under the overall cumulative assessment of the Proposed Development. Any cumulative affects arising are considered in the relevant chapters of this EIAR.

2.6.2.2 Other Developments/Land uses

The review of the Meath and Westmeath County Council planning register documents relevant general development planning applications in the vicinity of the proposed site of the wind farm and all its associated works, most of which relate to the provision and/or alteration of housing, agriculture-related structures and community facilities, as described previously under Section 2.3. These applications (which include those listed previously above in Section 2.5) have also been taken account of in describing the baseline environment and in the relevant assessments.

2.6.2.3 Co-Location of Peatland Restoration

The Draft Peatland Restoration Plan for the Ballivor Bog Group which is to be agreed with the EPA as part of the compliance with the Conditions of the EPA licence for the Derrygreenagh Bog Group is considered as a significant development which was fully considered in the location and design of the Proposed Development, and in the suite of assessments carried out as part of this EIAR. The scope of the restoration plan, which seeks, *inter alia* to stabilise former peat areas, remediate watercourses, rehabilitate and restore bog, also seeks to consider the impact of any other development on the site, and what impact these developments may have on the rehabilitation plan. As such, the rehabilitation plan has considered the potential for wind energy development on the site, and the plan has addressed the potential for co-location of wind energy and peatland restoration and rehabilitation at the site of former cut-over bog and for the after use of these locations to contribute to National biodiversity conservation objectives as well as achieving significant contribution on the journey to net zero as described in detail in Section 2.1 and 2.2 of this chapter.

It is considered that there will be a positive cumulative impact resulting from the Proposed Development in combination with the peatland rehabilitation plans mentioned previously. Together, the harnessing of wind energy and the rehabilitation of peat bogs at Ballivor Bog Group would develop the area as a model of integrated sustainable development, with renewable energy and ecological rehabilitation successfully co-located. The co-location of renewable energy generation and ecological rehabilitation would have a significant positive cumulative impact in relation to climate action resulting from the decarbonising of the electricity sector together with the carbon sequestration associated with the rewetting of bogs. Renewable energy generation and peatland rehabilitation can co-exist harmoniously and effectively and evidence of this has been demonstrated at both Mount Lucas and Cloncreen wind farms.

2.6.3 Cumulative Impact Summary

The cumulative impact assessments carried out in each of the subsequent chapters of this EIAR consider all potential significant cumulative effects arising from all land uses in the vicinity of the Proposed Development. These include permitted and existing wind farms in the area, ongoing agricultural practices, and drainage/maintenance works/programmes. Overall, the Proposed Development has been designed to mitigate impacts on the environment and other mitigation measures are set out within the EIAR. The mitigation measures set out in this EIAR will ensure that significant negative cumulative effects do not arise during the construction, operation, or decommissioning phases of the Proposed Development. Additional detail in relation to the potential significant cumulative effects arising and, where appropriate, the relevant mitigation measures proposed are set out within each of the relevant chapters of this EIAR.