

## 2. BACKGROUND TO THE PROPOSED DEVELOPMENT

This section of the Environmental Impact Assessment Report (EIAR) presents information on renewable energy and climate change policy and targets, the strategic, regional and local planning context for the Proposed Development, planning history, scoping and consultation, as well as setting out the nature of the cumulative impact assessment process undertaken. In terms of the planning permission being sought, the Applicant is Hibernian Wind Power Ltd. (Hibernian), who are a wholly owned subsidiary of ESB.

### 2.1 Renewable Energy Policy and Targets

The Climate Action Plan, published by the Government in 2019, clearly sets out the need for and urgency of change, in relation to energy generation as reproduced below:

*“The accelerating impact of greenhouse gas emissions on climate disruption must be arrested. The window of opportunity to act is fast closing, but Ireland is way off course.... The shift in climate is bringing profound shifts of desertification, rising sea levels, displaced population, profound challenges to the natural world, and economic and social disruption. We are close to a tipping point where these impacts will sharply worsen. Decarbonisation is now a must if the world is to contain the damage and build resilience in the face of such a profound challenge.”*

Furthermore, the Programme for Government released in June 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.”*

The site of the proposed development is currently an operational wind farm which has been supplying renewable energy to the national electricity grid since being commissioned in 2002. The existing wind farm has been contributing to Ireland’s energy and climate targets over the past 19 years.

Planning permission is being sought from Wexford County Council (WCC) to enable the existing wind farm to continue operating in its current form (with minor upgrades to the turbines and electrical components) for an additional 15 years. The primary driver behind extending the operational period of the wind farm is the need to provide additional renewable energy to the national grid from a proven source and appropriate site, to offset the use of fossil fuels within the electricity generating sector.

#### 2.1.1 Renewable Energy Resources

Renewable energy resources include solar, wind, water (hydropower, wave and tidal), heat (geothermal) and biomass (wood, waste) energy. These sources are constantly replenished through the cycles of nature, unlike fossil fuels, which are finite resources that are becoming increasingly scarce and expensive to extract.

Renewable energy resources offer sustainable alternatives to our dependency on fossil fuels as well as a means of reducing greenhouse gas (GHG) emissions and opportunities to reduce our reliance on imported fuels. These resources are abundantly available in Ireland, yet only a fraction has been tapped so far (Source: Sustainable Energy Authority of Ireland (SEAI) website, <https://www.seai.ie/>).

A gradual shift towards increasing the use of renewable energy resources would result in:

- Reduced carbon dioxide emissions;
- Secure and stable energy for the long-term;
- Reduced reliance on fuel imports;
- Investment and employment in our indigenous renewable energy projects, often in rural and underdeveloped areas.

Renewable energy development is recognised as a vital component of Ireland’s strategy to tackle the challenges of combating climate change and ensuring a secure supply of energy. Ireland is heavily dependent on the importation of fossil fuels to meet its energy needs, with imported fossil fuels accounting for 66% of Ireland’s dependency in 2017, at an estimated cost of €4 billion. This high dependency on energy imports is highly risky and Ireland is currently extremely vulnerable both in terms of meeting future energy needs and ensuring price stability (*Energy in Ireland 2018 Report*, SEAI, December 2018). The *Energy in Ireland 2019 Report*, SEAI (December 2019) has noted that final energy demand grew by 4.5% with increases in all sectors, resulting in a primary energy demand increase of 1.6%. Overall demand for fossil fuels increased by 0.1% in 2018. Furthermore, the share of electricity generated from renewable sources increased by 3.1 percentage points in 2018, to 33.2%.

The key targets for 2030 have been set out as follows:

- At least 40% reduction in greenhouse gas emissions (from 1990 levels)
- At least 32% share for renewable energy
- At least 32.5% improvement in energy efficiency

## 2.1.2 EU Policy and Targets

The 2030 Climate and Energy Policy Framework (adopted by The EU Council in October 2014) marks a further development of EU renewable energy policy. The Framework sets three key targets for the year 2030:

- A binding commitment at EU level of at least 40% domestic Greenhouse 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 GHG emissions for the period 2021-2030 in July 2016. The proposal implements EU commitments agreed upon at the twenty-first session of the Conference of the Parties (COP 21) held in Paris, France, in December 2015 (The Paris Agreement). The Paris Agreement marked an important milestone in the allocation to Member States of a package of climate targets that were formally adopted as part of the 2030 Climate and Energy Framework.

On the 27<sup>th</sup> 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. The agreement sets a headline target to deliver 32% of energy from renewable sources at EU level for 2030.

Additionally, Ireland supports the adoption of a net zero target by 2050 at the EU level. In this regard it should be noted that the Climate Change Advisory Council (CCAC) notes within their 2019 Annual Review that while the share of renewable electricity generation (particularly wind), is increasing in Ireland, the overall pace of the decarbonisation of the electricity generation sector is not compatible with a low-carbon transition to 2050.

### 2.1.3 Progress on Targets

The overall share of renewables in primary energy stood at 11.2% in 2019 which is up from the 2018 figure of 10%, and 9.3% in 2017. As per the SEAI's *Energy in Ireland 2020 Update* (see Section 2.1.5), the contribution from renewables in 2019, has risen to 12% of the Gross Final Consumption (GFC). According to the SEAI's *Renewable Energy in Ireland 2020 Update*, this has increased again with the total electrical output from wind in 2018 at 8,640GWh (not normalised) which was a 16% increase in the previous year. The SEAI's update goes on to note that wind generated 28% of all electricity in 2018 second only to gas.

In Ireland, it is widely acknowledged that the vast majority of the renewable electricity requirement is expected to be met through the development of indigenous wind power, as Ireland has a strong wind resource potential, with one of the best onshore wind speed averages in Europe (*The Value of Wind Energy to Ireland*, Póryry, 2014). Further, the SEAI *Energy In Ireland 2019 Report* (December 2019) confirms that most of the growth in renewable energy has come from wind. Wind provided 84% of all renewable energy generated in 2018.

The Climate Change Advisory Council (CCAC) notes within their *2019 Annual Review* that while the share of renewable electricity generation, particularly wind, is increasing in Ireland, the pace of decarbonisation of the electricity generation sector is not compatible with a low-carbon transition to 2050. As such, Ireland can continue to 'comply' with EU targets by purchasing emission allowances; however, the expenditure of public funds to do so would not result in any domestic benefit, and furthermore, would result in a more difficult and expensive challenge for the country to meet its future 2030 targets and beyond. The CCAC 2019 review concludes that continued and additional investment in capacity and technologies in the renewable energy sector is required to reach these targets.

The recent EirGrid report, *All Island Generation Capacity Statement 2020 - 2029* (August 2020), stated that it is assumed that renewable targets will be largely achieved through the deployment of additional wind powered generation in Ireland. As per the latest statistics issued by Wind Energy Ireland (formerly the Irish Wind Energy Association) new wind farms commissioned in the Republic of Ireland (ROI) have increased the total wind capacity to 4,309MW (<https://windenergyireland.com/about-wind/facts-stats>).

The EirGrid 2020 Statement also notes that, at a median demand level there is not currently adequate generation capacity to meet demand from 2026 onwards, on an all-Island basis (ROI and Northern Ireland), once Moneypoint Power Station closes at the end of 2025. Should any other power stations close then this could give rise to earlier deficits. This is especially pertinent with regard to the recent closures of the peat-fired Shannonbridge and Lough Ree Power Stations. In this context, the importance of wind energy becomes more apparent as it is estimated that 1MW of wind capacity can provide enough electricity to supply approximately 650 homes<sup>1</sup>.

It is noted that the key driver for electricity demand in Ireland for the next number of years is the connection of new large energy users, such as data centres. The EirGrid 2020-2029 report notes that '*the demand forecast in Ireland continues to be heavily influenced by the expected growth of large energy users, primarily data centres*'. In Ireland, the growth in energy demand for the next ten years varies between 23% in the low demand scenario, to 47% in the high scenario. The median forecast is generally aligned with EirGrid's *Tomorrow Energy Scenarios*, in which EirGrid predict an overall energy requirement for Ireland of approximately 41 terawatt-hours (TWh) by 2030. The proposed development through extending the operational life of the Carnsore Wind Farm will continue Ireland's push towards meeting the various statutory targets.

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<sup>1</sup> <https://www.iwea.com/about-wind/faqs>

2.1.4

## SEAI Renewable Energy in Ireland 2020 Update

The SEAI's *Renewable Energy in Ireland 2020 Update* was published in April 2020. Section 5.2 of the report details the most recent updates with regards to wind energy. It is noted that the total electrical output from wind in 2018 (not normalised) was 8,640GWh. This was an overall increase of 16% when compared to 2017 figures. In 2018 it was found that energy generated by wind accounted for 28% of the gross electrical consumption, this was second to only natural gas.

Plate 2-1 below depicts the annual growth in installed wind-generation capacity and overall cumulative capacity since 2000. It should be highlighted that in 2018 258MW of wind capacity was installed within Ireland, furthermore an additional 461MW was installed in 2019 bringing the total installed capacity to 4,137MW.

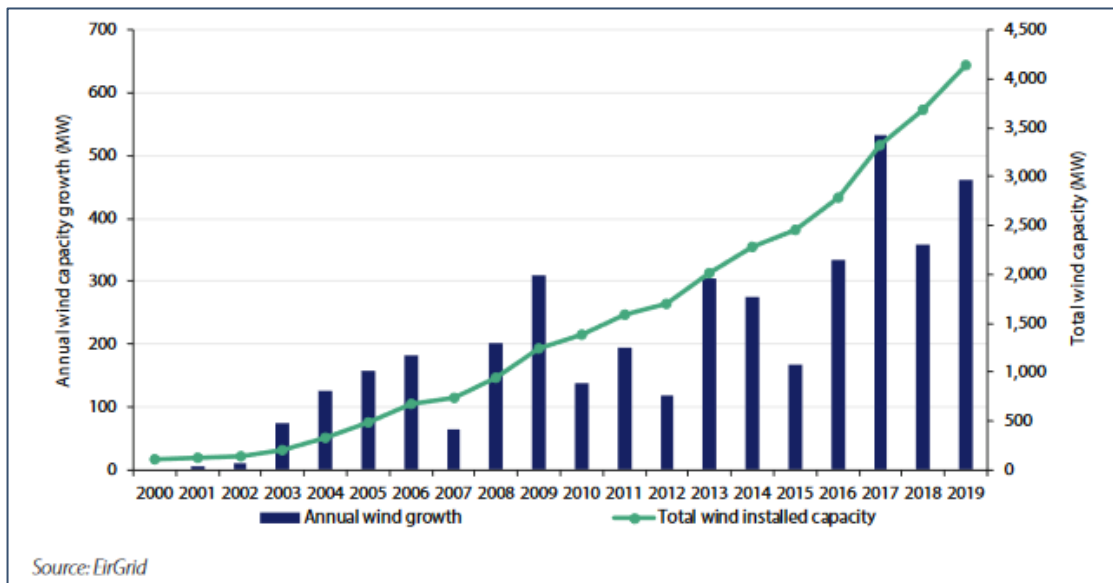


Plate 2-1 Installed Wind Generation Capacity 2000 - 2019 (SEAI, 2020)

In relation to renewable electricity as is depicted in Plate 2-2 below, Ireland was 12th out of the EU-28 at 33.2%, above the EU-28 average of 32.1%. The report notes that the top performing countries tend to have large hydropower resources, including Austria and Sweden. Furthermore, it is noted that Ireland had the second highest share of wind-generated electricity in 2018 at 28.1%.

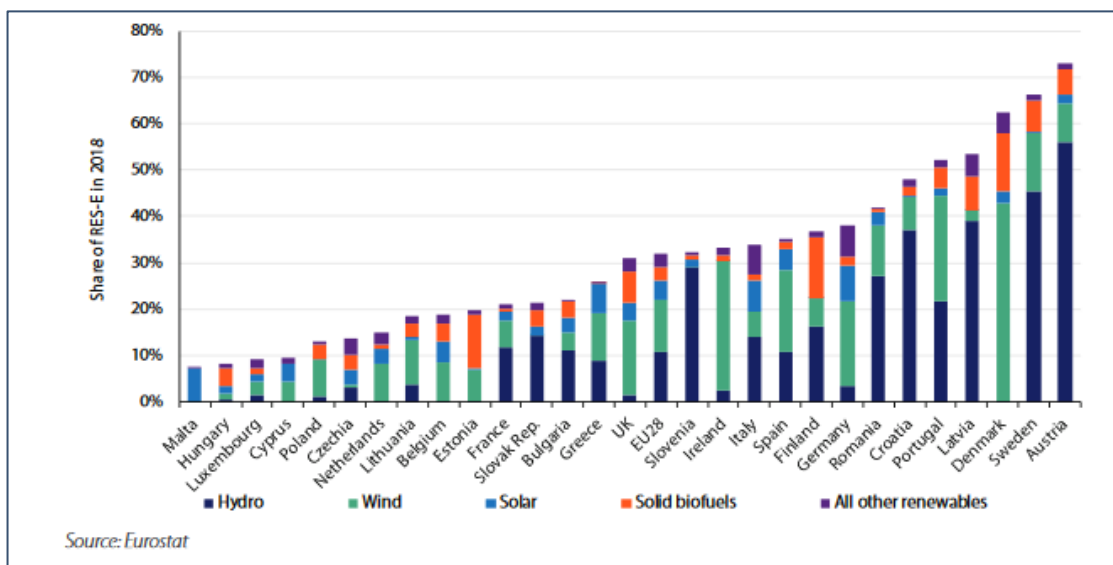


Plate 2-2 Renewable Electricity Share in 2018 by EU Member States (SEAI, 2020)

## SEAI Energy in Ireland 2020 Report

In December 2020, the SEAI produced the *Energy in Ireland 2020* Report which provides the most up to date figures available (from 2019) in relation to energy production and consumption in Ireland. The annual publication from SEAI presents national energy statistics on energy use in Ireland over the period 2005 to 2019. In the context of 2020, it has been noted that due to the global health crisis and measures deployed to mitigate its effects, the way that energy is used has changed. It is noted that:

*‘We have seen large reductions in transport energy use in particular, and after an initial decrease in electricity use, we saw all time high levels of demand following the recent easing of restriction leading into Christmas 2020.’*

Within the 2020 reflections it is set out that while overall energy use in Ireland in 2019 was at almost the same level as in 2001, the carbon dioxide (CO<sub>2</sub>) emissions from energy are down by almost one fifth with the economy one and a half times larger. Further to the above with regards to electricity the 2020 SEAI report states that in April and May electricity use was initially down somewhat on 2019, but from late summer onwards, electricity use was greater than the previous year. A new all-time peak in demand of 5,357MW was set on 7<sup>th</sup> December 2020, which was 245MW higher than the previous record set in 2010.

In terms of final energy demand this fell by 0.6%, primary energy demand also fell by 1.2% with the use of fossil fuels also decreasing by 3% in 2019. Renewables made up 12.0% of gross final consumption (the 2020 target was 16%), it is noted that this avoided 5.8 million tonnes of CO<sub>2</sub> emissions and over €500 million of fossil fuel imports. The share of electricity generated from renewable sources increased from 33.2% in 2018 to 36.5% in 2019 (the 2020 target was 40%). Wind generation accounted for 32% of all electricity generated and avoided 3.9 million tonnes of CO<sub>2</sub> emissions.

Section 2.6 of the 2020 Report provides updates surrounding electricity and notes that final electricity demand peaked in 2008 (2,295 kilo-tonnes of oil equivalent [ktoe]) and began falling in the years following this. However, demand started to grow again in 2015, in 2019 demand grew by 2% and surpassed the 2008 record by 6.6% at 2,444ktoe.

Primary energy is the total amount of energy required, including all the energy that is consumed for energy transformation processes such as electricity generation and oil refining. Primary energy is considered by fuel, sector and mode. The following are the main trends in primary energy:

- Fossil fuels accounted for 87% of all the energy used in Ireland in 2019. Demand for fossil fuels fell by 3% in 2019, a 17% reduction versus 2005 statistics.
- 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. Since 2005, coal demand has fallen by 80% (10.8% per annum).
- Total renewable energy increased by 10.3% during 2019. Hydro and wind increased by 28% and 16% respectively. Biomass use fell by 3.9% in 2019 and other renewables increased by 15%. The overall share of renewables in primary energy stood at 11.2% in 2019, up from 10% in 2018.
- Ireland returned to be a net importer of electricity in 2019 for the first time since 2015, importing 55ktoe.

In terms of energy generation in 2019, the share of renewables in the generation fuel mix increased to 25.7%, compared with 22.3% in 2018 due, mainly, to increased wind generation. In 2019, electricity generated from renewable sources amounted to 11,780GWh, accounting for 37.6% of gross electricity consumption (compared with 33% in 2018). Wind again accounted for the largest renewable energy generator, furthermore wind energy was the second largest source of electricity generated in 2019 after natural gas.

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 21<sup>st</sup> February 2020, which represented 72% of demand at that time. Furthermore, wind also accounted for 85% of renewable energy in 2019.

## 2.1.6 Summary of Compliance with Renewable Energy Policy and Targets

At present Ireland faces significant challenges through efforts to meet its EU targets for renewable energy by 2030 and its commitment to transition to a low carbon economy by 2050. In this regard the proposed extension to the operational period of the existing Carnsore Wind Farm (CWF) for an additional 15 years will contribute to the 2030 and 2050 targets through continued production and supply of renewable energy to the national grid.

## 2.2 National Policy

### 2.2.1 Introduction

This section of the EIAR provides a breakdown of national policy with regards to the proposed development. Under the national policy section the following are discussed:

- National Renewable Energy Action Plan, 2010;
- White Paper on Energy Policy in Ireland 2015-2030;
- Renewable Electricity Support Scheme RESS 2020; and,
- Programme for Government 2020.

National policy has developed in line with European and International policies, targets and commitments, in that the importance and urgency of decarbonising the energy generation sector, the economy in general and reducing greenhouse gas emissions has become increasingly apparent. The proposed development, as a current renewable energy supplier, complies with the nationally stated need to provide a greater amount of renewable energy to the national grid and will further reduce the national reliance on fossil fuels for electricity generation.

### 2.2.2 National Renewable Energy Action Plan

Article 4 of the Renewable Energy Directive on renewable energy required each Member State to adopt a national renewable energy action plan (NREAP) to be submitted to the European Commission. The NREAP sets out the Member State's national targets for the share of energy from renewable sources to be consumed in transport, electricity and heating and cooling in 2020, and demonstrates how the Member State will meet its overall national target established under the Directive.

The NREAP sets out the Government's strategic approach and planned measures to deliver on Ireland's 16% target under the Renewable Energy Directive. In relation to wind energy, the NREAP states:

*‘..Ireland has immense potential for the development of renewable energy particularly wind energy, both on and offshore and wave energy. The development and expansion of the use of renewable energy, together with measures aimed at a reduction and more efficient use of energy are important as regards meeting our climate change objectives and priorities, both nationally and at European level. At a high level a significant increase in renewable energy and the protection of the environment are thus mutually reinforcing goals.’*

### 2.2.3 White Paper on Energy Policy in Ireland 2015-2030

On 12<sup>th</sup> May 2014, *The Green Paper on Energy Policy in Ireland* was launched, opening the way for a public consultation process on the future of energy policy in Ireland for the medium to long-term. The paper 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.

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

The policy framework was developed to guide policy and actions that the Irish Government intends to take in the energy sector up to 2030 and also reaching out to 2050 to ensure a low carbon future that maintains Ireland's competitiveness and ensures a supply of affordable energy. The Energy Vision 2050, as established in the White Paper, describes a '*radical transformation*' of Ireland's energy system which will result in GHG emissions from the energy sector reducing by between 80% and 95%, compared to 1990 levels. The paper advises that a range of policy measures will be employed to achieve this vision and will involve amongst many things, generating electricity from renewable sources of 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 then DCENR confirmed that onshore wind is the cheapest form of renewable energy in Ireland, stating that:

*'Onshore wind continues to be the main contributor (18.2% of total generation and 81% of RESE 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.'*

### 2.2.4 Renewable Electricity Support Scheme RESS

The Climate Action Plan, published in June 2019, 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 70% 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. Terms and Conditions for the first competition (RESS 1:2020) was published in February 2020 and will provide support to renewable electricity projects in Ireland. It is intended that the RESS will deliver, amongst other policy objectives:

*'An ambitious renewable electricity policy to 2030 increasing energy security, energy sustainability and ensuring the cost effectiveness of energy policy'*

The Auction Scheme and the Enduring Connection Policy (ECP) framework has been established and is now operational. This framework will facilitate, and provide a pathway, to realise the established renewable electricity (RES-E) ambition of up to 70% by 2030.

## 2.3 Climate Change Policy and Targets

### 2.3.1 Introduction

This section of the EIAR presents the various policies and targets which relate to climate change. The below headings and sub-headings explore climate change in the context of EU and National policy and are broken down as follows:

- Impacts on Climate Change
- International Policy
  - United Nations Framework Convention on Climate Change (UNFCCC);
  - Kyoto Protocol Targets;
  - Doha Amendment to the Kyoto Protocol;
  - Conference of the Parties (COP) to the UNFCCC – Paris Agreement;
  - COP 25 Madrid – Current Progress; and,
  - Emissions Projections.
- National Policy
  - National Climate Change Adaptation Framework 2012;
  - National Policy Position on Climate Action and Low Carbon Development, 2014;
  - Report of the Joint Committee on Climate Action Climate Change: A Cross-Party Consensus for Action, March 2019;
  - Climate Action Plan, 2019; and,
  - Climate Action and Low Carbon Development (Amendment) Bill 2020.

International and national policy consistently identifies the need to reduce GHG emissions and stressed the importance of reducing global warming. The context of international policy has altered over the last 30 years from a warning nature to the current, widely accepted belief that we are in a climate crisis. The current proposed development, as a generator of renewable energy, will contribute to the decarbonisation of the energy sector and reduce harmful emissions. In this regard, it is in broad compliance with national and international climate change policy and targets.

The Environmental Protection Agency (EPA) report *Irish Climate Futures: Data for Decision-making* (EPA, 2019) notes that should business as usual continue, the Earth’s average temperature is likely to increase by between 2.6 degrees Celsius (°C) and 4.8°C above today’s levels. For Ireland, the changes listed (extreme events and sea level rise) would likely result in more frequent wet winters, dry summers and hot summers. It is acknowledged that this would pose challenges for water and flood risk management, agriculture and tourism.

#### 2.3.1.1 Impacts on Climate Change

Climate change, in the context of EU and national policy, refers to the change in climate that is attributable to human activity arising from the release of greenhouse gases into the atmosphere and which is additional to natural climate variability (Department of the Environment, Heritage and Local Government, 2006). In 2008, the EPA published the results of a study entitled *Climate Change – Refining the Impacts for Ireland*, as part of the STRIVE (Science, Technology, Research and Innovation for the Environment) Programme 2007 – 2013. This report stated that mean annual temperatures in Ireland have risen by 0.7°C over the past century. Mean temperatures in Ireland relative to the 1961 to 1990 averages are likely to rise by 1.4 to 1.8°C by the 2050’s and by more than 2°C by the end of the century, due to climate change.

Future precipitation projections are less certain than temperature but constitute the most important aspect of future climate change for Ireland. The study projects that winter rainfall in Ireland by the 2050’s will increase by approximately 10%, while summer rainfalls will reduce by 12 – 17%. Lengthier heatwaves, much reduced number of frost days, lengthier rainfall events in winter, more intense



downpours, and an increased likelihood for drought in summer are also projected. The STRIVE report on climate change impacts states that Ireland can and must adapt to the challenges of climate change. It notes that:

*‘Barriers to this, both scientific and socio-economic, are required to be identified and addressed in order that Ireland can be optimally positioned to thrive in a changing world.’*

## 2.3.2 International Policy

### 2.3.2.1 United Nations Framework Convention on Climate Change

In 1992, the United Nations Framework Convention on Climate Change (UNFCCC), was adopted as a framework for international efforts to combat the challenge posed by climate change. The UNFCCC has over 197 signatory countries and has almost universal membership from the international community. 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.

### 2.3.2.2 Kyoto Protocol Targets

Ireland is a Party to the Kyoto Protocol, an international agreement that sets limitations and reduction targets for greenhouse gases for developed countries. It came into effect in 2005, as a result of which, emission reduction targets agreed by developed countries, including Ireland, are now binding.

Under the Kyoto Protocol, the EU agreed to achieve a significant reduction in total greenhouse gas emissions of 8% below 1990 levels in the period 2008 to 2012. Ireland’s contribution to the EU commitment for the period 2008 – 2012 was to limit its greenhouse gas emissions to no more than 13% above 1990 levels.

### 2.3.2.3 Doha Amendment to the Kyoto Protocol

In Doha, Qatar, on 8<sup>th</sup> 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 1<sup>st</sup> January 2013 to 31<sup>st</sup> 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.

During the first commitment period, 37 industrialised countries and the European Community committed to reduce GHG emissions to an average of 5% against 1990 levels. During the second commitment period, Parties committed to reduce GHG emissions by at least 18% below 1990 levels in the eight-year period from 2013 to 2020; however, the composition of Parties in the second commitment period is different from the first.

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.

### 2.3.2.4 Conference of the Parties to the UNFCCC – Paris Agreement

Every year since 1995, the Conference of the Parties (COP) has gathered the 196 Parties (195 countries and the European Union) that have ratified the Convention to evaluate its implementation and negotiate new commitments. COP21 was organised by the United Nations in Paris, held from 30<sup>th</sup> November to 12<sup>th</sup> December 2015. Of significance, the COP21 closed with the adoption of the first international climate agreement (concluded by 195 countries and applicable to all). The 12-page text, made up of a preamble and 29 articles, provides for a limitation of the global average temperature rise to well below 2°C above pre-industrial levels and to limit the increase to 1.5°C. It is flexible and takes into account the needs and capacities of each country. It is balanced as regards adaptation and mitigation, and durable, with a periodical ratcheting-up of ambitions.

### 2.3.3 Emissions Projections

In June 2019, the EPA published an update on *Ireland’s Greenhouse Gas Emission Projections 2018-2040*. The report provides an assessment of Ireland’s progress towards achieving its emissions reduction targets set under the EU Effort Sharing Decision (Decision No 406/2009/EU) – i.e. to achieve a 20% reduction of non-Emission Trading Scheme (non-ETS) sector emissions, i.e. agriculture, transport, residential, commercial, non-energy intensive industry and waste, on 2005 levels, with annual binding limits set for each year over the 2013-2020 period.

Greenhouse gas emissions are projected to 2020 using 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 2017 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 NREAP and the National Energy Efficiency Action Plan (NEEAP).

The EPA 2019 Emission Projections update notes the following key trends:

- 2019 greenhouse gas emission projections show total emission increasing from current levels by 1% and 6% by 2020 and 2030, respectively, under ‘With Existing Measures’ scenario. Under ‘With Additional Measures’, emissions are estimated to decrease by 0.4% and 10% by 2020 and 2030, respectively;
- Under the ‘With Existing Measures’, emissions from Energy Industries are projected to increase by 31% between 2018 and 2030 to 15.4 million tonnes carbon dioxide equivalent (Mt CO<sub>2</sub> eq). Under the ‘With Additional Measures’, emissions between 2018 and 2030 are predicted to decrease by 27% to 8.6 Mt CO<sub>2</sub> eq;
- Under ‘With Existing Measures’, approximately 41% of electricity generation is projected to come from renewable energy sources by 2030. In the ‘With Additional Measures’ scenario, it is estimated that renewable energy generation increases to approximately 54% of electricity consumption;
- Agriculture and transport dominate non-ETS sector emissions accounting for 75% and 80% of emissions in 2020 and 2030, respectively. In 2020, the sectors with the largest contribution of emissions are Agriculture, Transport and Energy Industries with 34%, 21% and 20% share in total emissions, respectively, under the With Additional Measures scenario. In 2030, this is projected to change to 38%, 22% and 16% for these sectors, respectively, which reflects the growth in emissions from agriculture and reduction of emissions from power generation; and,
- Ireland has exceeded its annual binding limits in 2016 and 2017. However, even using this mechanism, Ireland will still be in non-compliance according to the latest projections.

The 2019 EPA report states that ‘A significant reduction in emissions over the longer term is projected as a result of the expansion of renewables (e.g. wind), assumed to reach 41-54% by 2030, with a move away from coal and peat’. Over the period 2013 – 2020, Ireland is projected to cumulatively exceed its compliance obligations by approximately 10.3 Mt CO<sub>2</sub> eq under the ‘With Existing Measures’ scenario and 9.2 Mt CO<sub>2</sub> eq under the ‘With Additional Measures’ scenario.

## 2.3.4 National Policy

### 2.3.4.1 Climate Action and Low Carbon Development Act 2015

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 it will be achieved through a combination of:

- A National Mitigation Plan (to lower Ireland’s greenhouse gas emissions levels); - see below
- 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.

### 2.3.4.2 National Adaptation Framework - Planning for a Climate Resilient Ireland 2018

Ireland's first statutory National Adaptation Framework (NAF) was published on 19<sup>th</sup> January 2018. The NAF sets out the national strategy to reduce the vulnerability of the country to the negative effects of climate change and to avail of positive impacts. The NAF was developed under the Climate Action and Low Carbon Development Act 2015.

The NAF, on the basis of evolving climate change literature within recent years, identifies a number of key facts which will need to be considered when designing adaptation measures and addressing climate change going into the future:

- Climate change will have diverse and wide-ranging impacts on Ireland’s environment, society, economic development, including managed and natural ecosystems, water resources, agriculture and food security, human health and coastal infrastructures and zones;
- Sufficient robust information exists nationally to further progress the process of implementing adaptation actions and increasing social, economic and environmental resilience to climate change;
- Uncertainties exist in relation to the extent and rate of future climate change. Addressing uncertainties is a challenge, but should not be read as an excuse for inaction as there is overall agreement on the robustness of trends and projections; and
- The impacts and risks of climate change can be reduced and managed through mitigation and adaptation actions.

The Framework acknowledges that, as per the Intergovernmental Panel on Climate Change (IPCC, 2013), 95% probability that the global warming of the last 50 years is a result of human activities. Specifically, the main contribution to this warming has come from the burning of fossil fuels. The Framework provides a number of guiding principles for adaptation at national level, regardless of how

successful efforts to mitigate greenhouse gas (GHG) emissions prove to be, as the impact of climate change will continue over the coming decades due to the delayed impacts of past and current emissions. In this regard, the Framework states that:

*“Adaptation not only depends on action by all levels of government but also on the active and sustained engagement of all stakeholders, including sectoral interests, the private sector, communities and individuals. Everybody has a role to play in making sure Ireland is taking appropriate adaptation action to achieve a climate resilient future. This is a joint responsibility where “climate proofing” our country is an undertaking for which all of society is responsible and everyone has a role to play.”*

The Framework concludes that there is limited choice in the context of climate change other than to implement adaptation measures simultaneously with on-going mitigation measures (e.g. the continued development and integration of renewable energy infrastructure) to deal with the unavoidable climate change impacts and associated economic, environmental and social costs.

### 2.3.4.3 **Report of the Joint Committee on Climate Action Climate Change: A Cross-Party Consensus for Action, March 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 notes that *“Ireland’s performance in meeting international obligations has to date been poor”*. The Committee places concern that predictions of emissions indicate that the state is off track in meeting its 2020 and 2030 targets under the Kyoto protocol and the EU Directives.

The committee recommended that new climate change legislation be enacted by the Oireachtas in 2019. The following recommendations have been listed:

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.
4. A target for the renewable share of electricity generation of 70% by 2030.

Further to this the committee acknowledge that the measures which are currently in place along with the measures suggested within the report will not be sufficient in meeting Ireland’s targets.

Chapter 7 of the report outlines the committee’s recommendations for developing Ireland’s capacity in renewable energies and renewable electricity in particular. It is noted that the transformation of Ireland’s energy system will be required for the country to meet its GHG emission targets. To reach net zero emissions by 2050 the report recognises that the country will be required to fully decarbonize electricity generation. Section 7.5 relates to onshore renewable energy generation, it is acknowledged that onshore wind energy is currently the primary source of renewable electricity within Ireland, accounting for 84% of renewable power generated in 2017, it is also detailed that, ‘onshore wind alone will not supply Ireland with sufficient electricity to become self-sufficient, it is evident that it must be used alongside other sources of renewable energy’.

Under its recommendations, the Committee encourages the upgrading of existing onshore wind turbines where this will yield additional potential. While acknowledging that there are challenges in relation to securing additional on-shore wind generated renewable energy the Report acknowledges that on-shore wind has a pivotal role to play in achieving climate action targets.

#### 2.3.4.4 Climate Action Plan 2019

The Climate Action Plan 2019 (CAP) was published on the 1<sup>st</sup> August 2019 by the Department of Communications, Climate Action and Environment (DCCAE). The CAP sets out an ambitious course of action over the coming years to address the impacts which climate may have on Ireland's environment, society, economic and natural resources. This Plan clearly recognises that Ireland must significantly step up its commitments to tackle climate disruption.

Chapter 1 of the CAP sets out the nature of the challenge which Ireland faces over the coming years. The CAP notes that the evidence for warming of our climate system is beyond dispute with observations showing that global average temperatures having increased by more than 1°C since pre-industrial times. These changes will cause extensive direct and indirect harm to Ireland and its people, as well as to other countries more exposed and less able than we are to withstand the associated impacts, which are predicted to include:

- Rising sea-levels threatening habitable land and particularly coastal infrastructure,
- Extreme weather, including more intense storms and rainfall affecting our land, coastline and seas,
- Further pressure on our water resources and food production systems with associated impacts on fluvial and coastal ecosystems,
- Increased chance and scale of river and coastal flooding,
- Greater political and security instability,
- Displacement of population and climate refugees,
- Heightened risk of the arrival of new pests and diseases,
- Poorer water quality,
- Changes in the distribution and time of lifecycle events of plant and animal species on land and in the oceans, and
- It is also recognised within the Plan that in addition to the above many of the pollutants associated with climate change are also damaging to human health.

It is the ambition of the CAP to deliver a step-change in our emissions performance over the coming decade, so that we will not only meet our EU targets for 2030 but will also be well placed to meet our mid-century decarbonisation objectives.

Plate 2-3 below depicts Ireland's decarbonisation pathway up to the year 2030. The below will be used to manage Ireland's decarbonisation pathway and details the path for the various sectors.

Technology	NDP	Uptake to meet 2030 targets (Based on MACC analysis)		
		2030	2025	2030
<b>Electricity</b>	<b>Total RES in Generation mix<sup>1</sup>, %</b>	<b>55</b>	<b>52</b>	<b>70</b>
	• Onshore wind, GW	~7	~6.5	~8.2
	• Offshore wind, GW	1.8	~1.0	~3.5
	• Solar PV, GW	1.5	~0.2	~0.4
<b>Transport</b>	<b>Electric Vehicles, #</b>	<b>498,000</b>	<b>181,500</b>	<b>536,000</b>
	• Passenger EVs, #	358,000	57,000	550,000
	• Passenger PHEVs, #	118,000	94,000	290,000
	• Electric delivery vans, #	19,000	30,000	61,000
	• Electric trucks, #	n.a	0	34,000
	• Electric buses, #	1,250	500-600	1,000-1,200
	<b>Bioethanol blend, Volume</b>	<b>E10</b>	<b>E10</b>	<b>E10</b>
<b>Biodiesel blend, Volume</b>	<b>B12</b>	<b>B12</b>	<b>B12</b>	
<b>Built Environment</b>	<b>Retrofitted homes<sup>1</sup>, cumulative 2021-30, #</b>	<b>450,000</b>	<b>300,000</b>	<b>500,000</b>
	<b>Electric heating sources, total residential, #</b>	<b>370,000</b>	<b>350,000</b>	<b>600,000</b>
	• New buildings, #	200,000	50,000	200,000
	• Existing buildings, #	170,000	300,000	400,000
	<b>Electric heating sources, total commercial, #</b>	<b>15,000<sup>2</sup></b>	<b>15,000</b>	<b>25,000</b>
<b>Enterprise</b>	<b>Emissions, MtCO<sub>2</sub>e<sup>q</sup></b>	<b>9</b>	<b>8</b>	<b>8</b>
	• Alternative fuels in cement fuel mix, %	N/A	65%	80%
	• CO <sub>2</sub> -neutral heat generation in food industry <sup>2</sup> , %	N/A	~70%	~80%
<b>Agriculture</b>	<b>Emissions, MtCO<sub>2</sub>e<sup>q</sup></b>	<b>21</b>	<b>19</b>	<b>18</b>
	• Fertilizers CAN replacement, %	N/A	40%	50%
	• Trailing-shoe slurry spreading, %	N/A	30%	50%
<b>Other (e.g. waste)</b>	<b>Emissions, MtCO<sub>2</sub>e<sup>q</sup></b>	<b>3.2</b>	<b>3.2</b>	<b>3.2</b>

“Solar PV, some electrification of buses, and biofuel blending are identified in 2030 the NDP scenario but are not showing as cost-effective in MACC. Despite MACC analysis these technologies may remain in plan given other factors (e.g., exchanger cost, ease of implementation, need for public sector leadership)”

1 Retrofit to B2 BER fabric equivalent  
 2 Includes biomass and electricity  
 3 Not specified in NDP, estimated based on residential ratio  
 4 RESS competitive auction determines the final mix

Plate 2-3 Ireland's Decarbonisation Pathway Dashboard to 2030 (DCCAE, 2019)

Chapter 7 of the CAP details the views surrounding electricity. The CAP notes that as of 2017 electricity accounted for 19.3% of Ireland’s greenhouse gases which was down from the 2016 figure of 20.4%. With regards to electricity the following is detailed:

*“It is important that we decarbonise the electricity that we consume by harnessing our significant renewable energy resources. By doing this we will also become less dependent on imported fossil fuels.”*

In Ireland, in 2017 a total of 30.1% of electricity produced came from renewable sources, the target to be achieved by 2020 is set at 40%. The CAP goes on to note that ‘given our 40% target is based on a percentage of total energy demand, this rising demand makes meeting our 2020 target even more challenging and latest forecasts indicate we may miss this target by 3 to 4 percentage points’. Further to this while decarbonising electricity is a key aspect of the strategy it is noted that this is against the background of rapid projected growth in electricity demand. The CAP notes that it is expected that demand for electricity is forecast to increase by 50% above existing capacity in the next decade. The CAP recognises that:

*“Ensuring we build renewable, rather than fossil fuel, generation capacity to help meet this demand is essential.”*

The CAP goes on to note that policy measures to date will not achieve the level of decarbonisation required in the electricity sector to meet the 2030 emissions reduction targets, as such it is listed that ‘we must reduce our electricity sector emissions to 4-5 Mt in 2030’. In relation to emissions the following is noted:

*“In 2017, emissions from electricity were 12 Mt and in 2030, despite implementation of Project Ireland 2040 measures, emissions are projected to be 8 Mt. This clearly demonstrates the need for a significant step-up in ambition over existing policy, not only to meet our 2030 targets, but to set us on course to deliver substantive decarbonisation of our economy and society by 2050.”*

In the electricity sector, reaching a 70% share of renewable electricity would require 50-55% emissions reduction by 2030. Under Section 7.2 of the CAP, the following targets have been set out:

- Reduce CO2 eq. emissions from the sector by 50–55% relative to 2030 Pre-National Development Plan (NDP) projections.
- Deliver an early and complete phase-out of coal- and peat-fired electricity generation.
- Increase electricity generated from renewable sources to 70%, indicatively comprising:
  - at least 3.5 GW of offshore renewable energy;
  - up to 1.5 GW of grid-scale solar energy; and
  - up to 8.2 GW total of increased onshore wind capacity.
- Meet 15% of electricity demand by renewable sources contracted under Corporate PPAs.

Achieving 70% renewable electricity by 2030 will involve phasing out coal- and peat-fired electricity generation plants, increasing our renewable electricity, reinforcing our grid (including greater interconnection to allow electricity to flow between Ireland and other countries) and putting systems in place to manage intermittent sources of power, especially from wind.

Section 7.2 of the CAP notes the ‘Measures to deliver targets’ in which efforts to meet the 2030 ambitions which includes increased harnessing of renewable energy. As seen in Plate 2-4 below, CAP identifies a need for 8.2GW of onshore wind generation and states that in 2017 there was 3.3GW in place, therefore Ireland needs to more than double its installed capacity of wind generation. As the proposed development is currently operational the proposed development will allow the continued generation of renewable energy with its supply to the grid continuing. Accordingly, the 2019 CAP presents clear and unequivocal support for the provision of additional renewable energy generation and presents yet further policy support for increased onshore wind energy.

Key Metrics	2017	2025 Based on MACC	2030 Based on NDP	2030 Based on MACC
Share of Renewable Electricity, %	~30% <sup>20</sup>	52%	55%	70%
Onshore Wind Capacity, GW	~3.3	6.5	N/A	8.2
Offshore Wind Capacity, GW	NA	1.0	N/A	3.5
Solar PV Capacity, GW	NA	0.2	N/A	0.4
CCGT Capacity, GW	~3.6	5.1	N/A	4.7

Plate 2-4 Potential Metrics to Deliver Abatement in Electricity (DCCAE, 2019)

### 2.3.4.5 Climate Action and Low Carbon Development (Amendment) Bill 2020

The Draft Climate Action and Low Carbon Development (amendment) Bill 2020 was published by the Irish Government in October 2020. The Bill commits Ireland, in law, to move to a climate resilient and climate neutral economy by 2050. It is noted that under the Programme for Government Ireland are committed to a 7% average yearly reduction in overall greenhouse gas emissions over the next decade to achieve a net zero emission by the year 2050, it is set out that the Draft Climate Action and Low Carbon Development (amendment) Bill 2020 will drive implementation of a suite of policies to help achieve this goal.

The following is noted in relation to the Bill:

*“The Bill brings in a system of 5-year economy-wide carbon budgets, which will outline a ceiling for total greenhouse gas emissions. These will be prepared by the Climate Change Advisory Council and presented to Government to consider and approve, with input from the Oireachtas.”*

The Bill includes the following key elements:

- Establishes a 2050 emissions target;
- Introduces system of successive 5-year, economy-wide carbon budgets starting in 2021;
- Strengthens the role of the Climate Change Advisory Council in proposing carbon budgets;
- Introduces a requirement to annually revise the Climate Action Plan and prepare a National Long Term Climate Action Strategy at least every decade;
- Introduces a requirement for all Local Authorities to prepare individual Climate Action Plans which will include both mitigation and adaptation measures; and,
- Gives a stronger oversight role for the Oireachtas through an Oireachtas Committee.

### 2.3.5 Summary of Compliance with Climate Change Policy

As noted previously the Carnsore Wind Farm is operational and has been since 2002 when it was commissioned. The wind farm has been generating renewable electricity and supplying to the national grid over the last 19 years. The proposal to extend the operational period of the development will therefore aid in the overall supply of renewables therefore increase the amount of renewable energy that will be available on the national grid and will contribute to Ireland's efforts and stated policy to decarbonise the economy. The proposed renewable energy will help Ireland address the challenge of decarbonising electricity generation as well as addressing the country's over-dependence on imported fossil fuels.

## 2.4 Strategic Planning Context

### 2.4.1 Introduction

This section of the EIAR Provides the strategic planning context of the proposed development. As is set out below, the proposed development is in line with national, regional and local policies, frameworks, guidelines and plans. This section has been broken down to the following sections:

- National Planning Framework 2018,
  - Key Sustainability Elements of National Planning Framework
- Regional Policy
  - Regional Spatial and Economic Strategy for the Southern Region- Regional Spatial and Economic Strategy
- Local Policy
  - Wexford County Development Plan 2013-2019
  - Draft Wexford County Development Plan 2021-2027
- Other Relevant Guidelines
  - DoEHLG Wind Energy Guidelines 2006
  - Interim Guidelines for Planning Authorities on Statutory Plans, Renewable Energy and Climate Change 2017
  - Department Circular PL5/2017
  - Draft Revised Wind Energy Development Guidelines 2019
  - IWEA Best Practice Guidelines for the Irish Wind Energy Industry 2012
  - IWEA Best Practice Principles in Community Engagement and Community Commitment 2013



- Code of Practice for Wind Energy Development in Ireland - Guidelines for Community Engagement 2016
- IWEA Community Engagement Strategy 2018
- Commission for Regulation of Utilities: Grid Connection Policy
- Renewable Energy Support Scheme (RESS)
- Forest Service Guidelines

As a renewable energy project the current proposal is broadly consistent with the overall national policy objectives to increase penetration and deployment of renewable energy resources and has been designed in the context of the relevant wind energy and other guidelines. The specific compliance with the County Development Plan provisions are dealt with in detail in Section 2.4.3.1 below.

#### 2.4.1.1 National Planning Framework, 2018-2024

The National Planning Framework ('NPF'), published in February of 2018, aims to shape and guide the future growth and development of Ireland up to 2040 and supersedes the National Spatial Strategy 2002-2020 ('NSS').

The NPF notes that while the overall quality of the country's environment is good it is not without challenges. The NPF notes that the manner in which we plan for potential issues is important in the context of sustainability of our environment.

*“While the overall quality of our environment is good, this masks some of the threats we now face. Key national environmental challenges include the need to accelerate action on climate change, health risks to drinking water, treating urban waste water, protecting important and vulnerable habitats as well as diminishing wild countryside and dealing with air quality problems in urban areas. It is also important to make space for nature into the future, as our population increases.”*

A key aspect of the NPF surrounds the long-term sustainability of the environment, it 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.”*

The Government will address environmental and climate challenges through the following overarching aims as listed under 'Resource Efficiency and Transition to a Low Carbon Economy':

- Sustainable Land Management and Resource Efficiency
- Low Carbon Economy
- Renewable Energy
- Managing Waste

The NPF notes that the population of Ireland is projected to increase by approximately 1 million people by 2040 and that in order to strengthen and facilitate more environmentally focused planning at the local level, the NPF states that future planning and development will need to:

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

In order to meet legally binding targets agreed at EU level, it is a national objective for Ireland to make a transition and become a competitive low carbon economy by the year 2050. To aid in meeting these targets the National Planning Framework notes that the Government will aim to support the following objectives:

- Integrating climate considerations into statutory plans and guidelines. In order to reduce vulnerability to negative effects and avoid inappropriate forms of development in vulnerable areas.
- More energy efficient development through the location of housing and employment along public transport corridors, where people can choose to use less energy intensive public transport, rather than being dependent on the car.

The NPF highlights that Ireland’s national energy policy is focused on three pillars: (1) sustainability, (2) security of supply and (3) competitiveness. Furthermore, it is noted that *“The Government recognise that Ireland must reduce greenhouse gas emissions from the energy sector by at least 80% by 2050, compared to 1990 levels, while at the same time ensuring security of supply of competitive energy sources to our citizens and businesses.”* The NPF notes that our transition to a low carbon energy future requires:

- 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, smartgrids, electric vehicles, buildings, ocean energy and bio energy.
- Legal and regulatory frameworks to meet demands and challenges in transitioning to a low carbon society.

The transition towards a low carbon and climate resilient society is identified as one of the national strategic outcomes to guide the implementation of the NPF. National Policy Objective 55 of the NPF specifically relates to renewable energy, stating it is an objective 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”.*

National Strategic Outcome 8-Transition to a Low Carbon and Climate Resilient Society aims to *“Deliver 40% of our electricity needs from renewable sources by 2020 with a strategic aim to increase renewable deployment in line with EU targets and national policy objectives out of 2030 and beyond.”*

The NPF further emphasises that new energy systems and transmission grids will be necessary for a more distributed, more renewables focused energy generation system to harness the considerable on-shore and off-shore potential from energy sources such as wind, wave and solar and *“connecting the richest sources of that energy to the major sources of demand”*. The NPF recognises that the development of on-shore and off-shore renewable energy is critically dependent on the development of enabling infrastructure including grid facilities to connect to major sources of energy demand.

## 2.4.2 Regional Policy

### 2.4.2.1 Regional Spatial and Economic Strategy for the Southern Region

The Regional Spatial and Economic Strategy (RSES) for the Southern Region seeks to achieve balanced regional development and full implementation of Project Ireland 2040 – the National Planning Framework. The RSES sets out a vision for the Southern Region to:

- Nurture all our places to realise their full potential

- Protect, and enhance our environment
- Successfully combat climate change
- Achieve economic prosperity and improved quality of life for all our citizens
- Accommodate expanded growth and development in suitable locations
- Make the Southern Region one of Europe’s most creative, innovative, greenest and liveable regions

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:

*“Climate Change represents the most serious threat to human life and the environment. If action is not taken on a global scale, global warming will continue to change weather patterns, cause sea levels to rise, threaten the future of entire nations and pose wider risks in terms of degradation of biodiversity, and threaten the planet’s ability to provide adequate food and shelter for the human population.”*

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

Chapter 5 of the RSES notes details the regions plans and objectives with regards to the environment. The RSES underlines the need to:

*“Safeguard and enhance our environment through sustainable development, transitioning to a low carbon and climate resilient society.”*

The observed and predicted climate changes for Ireland include the following:

- An increase in average temperatures of 0.8% between 1900 and 2011 with projected increases across all seasons 0.9% -1.7% to 2050;
- Observed increases in rainfall with projected reductions in average levels for 3 seasons, but a substantial increase in frequency of heavy precipitation events;
- A projected increase in the number and intensity of storms in the North Atlantic;
- Sea levels rising at approximately 3.5cm per decade, continuing to rise up to 0.8m per decade;
- An increase in sea surface temperatures by 0.7C since 1850 with a projected warming of 1.9c by the end of the century.

The following objectives have been listed with regards to the decarbonisation of energy:

- **RPO 87- Low Carbon Energy Future**  
 The RSES is committed to the implementation of the Government’s policy under Ireland’s Transition to a Low Carbon Energy Future 2015-30 and Climate Action Plan 2019. It is an objective to promote change across business, public and residential sectors to achieve reduced GHG emissions in accordance with current and future national targets, improve energy efficiency and increase the use of renewable energy sources across the key sectors of electricity supply, heating, transport and agriculture.
- **RPO 88- National Mitigation and National Adaption Framework**  
 The RSES is committed to the implementation of the National Mitigation Plan and National Adaption Framework: Planning for a Climate Resilient Ireland to enable the Region transition to a low carbon, climate resilient and environmentally sustainable economy. It is an objective to ensure effective co-ordination of climate action with the

Climate Action Regional Offices and local authorities to implement the National Mitigation Plan and the National Adaptation Framework in the development and implementation of long-term solutions and extensive adaptation measures.

Further the following objectives have been put in place with regards to climate resilience:

- **RPO 89- Building Resilience to Climate Change**
  - a) It is an objective to support measures to build resilience to climate change throughout the Region to address impact reduction, adaptive capacity, awareness raising, providing for nature-based solutions and emergency planning;
  - b) Local Authorities and other public agencies shall continue to work with the Office of Public Works to implement the Flood Risk Management Plans and address existing and potential future flood risks arising from coastal, fluvial, pluvial, groundwater and potential sources of flood risk.

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 technology, has an important role in delivering value and clean electricity for Ireland.

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

- **RPO 95- Sustainable Renewable Energy Generation**  
 It is an objective to support implementation of the National Renewable Energy Action Plan (NREAP), and the Offshore Renewable Energy Plan and the implementation of mitigation measures outlined in their respective SEA and AA and leverage the Region as a leader and innovator in sustainable renewable energy generation.
- **RPO 96- Integrating Renewable Energy Sources**  
 It is an objective to support the sustainable development, maintenance and upgrading of electricity and gas network grid infrastructure to integrate a renewable energy sources and ensure our national and regional energy system remains safe, secure and ready to meet increased demand as the regional economy grows.
- **RPO 97- Power Stations and Renewable Energy**  
 It is an objective to support the sustainable technology upgrading and conversion of power stations in the Region to increase capacity for use of energy efficient and renewable energy sources.
- **RPO 98- Regional Renewable Energy Strategy**  
 It is an objective to support the development of a Regional Renewable Energy Strategy with relevant stakeholders.
- **RPO 99- Renewable Wind Energy**  
 It is an objective to support the sustainable development of renewable wind energy (on shore and off shore) at appropriate locations and related grid infrastructure in the Region in compliance with national Wind Energy Guidelines.
- **RPO 100- Indigenous Renewable Energy Production and Grid Injection**  
 It is an objective to support the integration of indigenous renewable energy production and grid injection.
- **RPO 101 International Hub for Energy Innovation**  
 It is an objective to support continued innovation and research in the energy sector and to develop a role as an international hub for energy innovation.
- **RPO 102- Energy Research Funding**  
 It is an objective to support initiatives for energy research funding within our region to accelerate diversification away from fossil fuels to green energy, including the potential of wind, wave, solar, biomass, biofuels, biogas and hydrogen in the Region.
- **RPO 103- Interconnection Infrastructure**

It is an objective to support the sustainable development of interconnection infrastructure, in particular the potential for the sustainable development of an international connection between Ireland and France in the Region.

## 2.4.3 Local Policy

### 2.4.3.1 Wexford County Development Plan 2013-2019

The Wexford County Development Plan 2013-2019 (WCDP) sets out Wexford County Council's intentions for the future development of land, including measures for the improvement of the natural and physical environment and the provision of infrastructure.

Chapter 5 of the WCDP sets out the councils' considerations regarding climate change in the context of the county. In this regard it is clear that the WCDP promotes the development and use of renewable sources of energy. The following is noted:

*“The energy potential of these resources can be harnessed to meet the energy needs of the county and perhaps can be exported as an economic output. The Council will prioritise the development of renewable energy resources and the maximisation of electricity production from renewable sources where possible.”*

Under this chapter the following relevant objectives are included:

- Objective CC02: To have regard to the any future Climate Change Action Plan for the South-East Region.
- Objective CC07: To raise awareness of climate change and its potential impacts and encourage businesses, local communities and people to be as self-sustaining as possible.
- Objective CC09: To promote and encourage new developments to mitigate against, and adapt to, where possible the impacts of climate change through the location, layout and design of the development.

Chapter 6 of the WCDP notes the councils plans surrounding employment, economy and enterprise, in the context of renewable development Section 6.4.4 sets out that Wexford is ideally positioned to capitalise on its assets in terms of hydro, solar, tidal and wind energy. The Council recognises that a range of opportunities exist in renewable energies and energy crop production for farmers, energy producers and businesses. The following objective is noted:

*“Objective ED08: To facilitate and encourage the development of ‘green’ industries including industries relating to renewable energy, energy-efficient technologies, waste recycling and conservation on appropriately zoned land or on land within villages to a scale and size that is in keeping with the character of the area, subject to complying with normal planning and environmental criteria and the development management standards in Chapter 18. Green industries will not be permitted outside settlements unless the development complies with the locational requirements of waste management facilities outlined in Chapter 10 and subject to complying with normal planning and environmental criteria and the development management standards contained in Chapter 18.”*

Chapter 11 of the WCDP sets out the Councils considerations surrounding energy. Under Section 11.1 it is noted that “a reliable energy supply is essential for social and economic development”. The ability to deliver a secure and uninterrupted sustainable energy supply at a competitive cost is critical for the county to continue to attract inward investment and to provide a supportive environment for industry. It is noted that the council will encourage the development of renewable energy resources.

Section 11.3.2 deals with wind energy, it is noted that the Wind Energy Strategy for County Wexford 2013-2019 identifies areas for wind energy development having regard to a number of factors including

wind speed, proximity to national grid and environmental constraints. The Strategy works towards a target of 255 MW of wind energy by 2019 which will enable County Wexford to generate the equivalent of over 70% of its electricity needs from wind energy and make a significant contribution to the national target of 40% electricity consumption from renewable sources by 2020. The WCDP notes that the target of 70% has been chosen as the county has significantly more wind availability. The wind energy strategy is discussed under Section 2.4.3.1.1 of this report. The following relevant objectives are listed:

- **Objective EN01:** To facilitate the achievement of a secure and efficient energy supply and storage for County Wexford.
- **Objective EN02:** To promote County Wexford as a low carbon county by 2019 as a means of attracting inward investment and to facilitate the development of energy sources which will achieve low carbon outputs.
- **Objective EN03:** To raise awareness of the need to reverse fossil fuel dependency, to mitigate the effects of peak oil and reduce carbon emissions, to mitigate the effects of climate change.

#### 2.4.3.1.1 **Wexford Wind Energy Strategy 2013-2019**

The Wind Energy Strategy forms part of the Wexford County Development Plan 2013-2019. The key objectives of the Wind Energy Strategy are as follows:

- Ensure the security of energy supply by supporting, in principle and at appropriate scales and locations, the development of wind energy resources in the county.
- Promote the development of wind energy and other renewable energy sources in the county to meet national renewable energy targets (supplying a minimum of 40% of electricity consumption from renewable sources by 2020).
- Work towards a target of 255 MW of wind energy, to enable County Wexford to make the initial steps toward a low carbon economy by 2020 and generate the equivalent of 70% of its electricity needs from wind energy.

The wind energy strategy identifies strategic areas in the county where wind energy developments are generally acceptable, open for consideration or not normally permissible. The county has been divided into three areas for the purposes of wind energy development: Acceptable in Principle, Open for Consideration and Not Normally Permissible. The subject site is located within an area which has been designated as ‘not normally permissible’ (refer to Plate 2-5). In this regard the following per Table 4 of the WES is of note:

*“This area is considered to be generally unsuitable for wind farm development due to significant environmental, heritage and landscape constraints, housing density, distance from the grid and/or wind speed. Individual small scale turbines will be considered on a case-by-case basis for local community needs. Applications for re-powering (by replacing existing wind turbines) and extension of existing and permitted wind farms will be assessed on a case-by-case basis and will be subject to the development management standards contained in Section 5. When assessing planning applications for extensions against the development management standards, the planning authority will have particular regard to the reasons why the area was identified as ‘Not Normally Permissible’ in Section 4.2. In this regard, it is considered that the north of the county will reach capacity if all permitted wind farms are built.”*

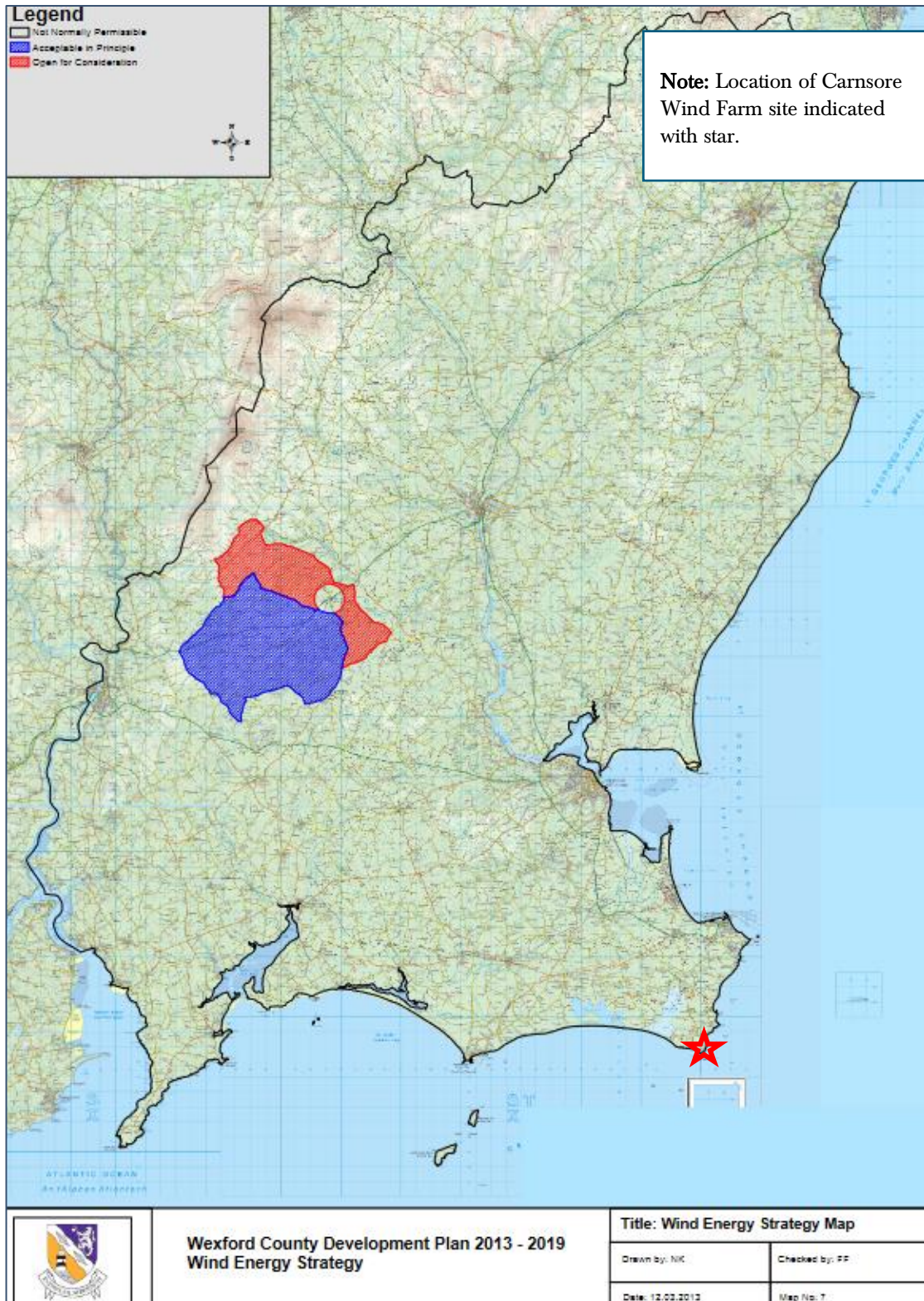


Plate 2-5 Wexford Wind Energy Strategy Map (WCC, 2013)

With respect to the site’s designation as ‘not normally permissible’ there is clear acceptance within the WCDP to provide for re-powering and/or extension of existing/permitted wind farms, in that each will be assessed by the Planning Authority on its own merits on a case-by-case basis. These must also be subject to the development standards set out under Section 5 of the WCDP. It is also noted that the Planning Authority will take cognisance of the reasoning for the site being identified as ‘not normally permissible’, (the site in this context is discussed further below under Section 2.4.3.3).

The following objectives have been included under the wind energy strategy:

- Objective WE01 Ensure the security of energy supply by supporting the development of wind energy resources in County Wexford at appropriate scales and in appropriate locations, subject to compliance with normal planning and environmental criteria and the development management standards contained in Section 5.
- Objective WE02 Aim to achieve a target of 255 MW of wind energy, to enable County Wexford to make the initial steps toward a low carbon economy by 2020.
- Objective WE03 Facilitate wind energy development on appropriate sites in the county and work with the relevant agencies to encourage investment in research and technology associated with wind farms and other renewable energy technology.
- Objective WE04 Favourably consider proposals for the development of infrastructure for the production, storage and distribution of electricity through the harnessing of wind energy in appropriate sites and locations, subject to relevant policy, legislation and environmental considerations and the development management standards contained in Section 5.
- Objectives WE09 Consider the re-powering (by replacing existing wind turbines) and extension of existing wind farms. Applications on such sites will each be assessed on their merits and will be subject to the development management standards contained in Section 5 (see Table 4).

Section 5.2.30 sets out the development standards for replacement re-powering and redevelopment of wind farm developments, in this regard the following should be noted:

- Proposals for replacing existing turbines or for the re-powering or redevelopment of existing wind energy developments will be considered. Such proposals will generally require planning permission, unless it can be demonstrated to the satisfaction of the Planning Authority that changes are of a sufficiently minor nature, would not constitute a material change to the development and would not generate additional impacts.
- Applications for re-powering (by replacing existing wind turbines) and extension of existing wind farms in the Not Normally Permissible areas will each be considered on their merits (see Table 4).

#### 2.4.3.2 **Draft Wexford County Development Plan 2021-2027**

Wexford County Council have commenced their preparation of the Wexford County Development 2021-2027 (DWCDP). The Plan provides for the physical, economic and social development of the county and sets out the guiding strategies, objectives and standards for this development. The Plan builds on the strategies and objectives of the previous County Development Plan 2013-2019.

In the introduction to the DWCDP the council note that as the impacts of climate change are experienced first-hand at the local level, the Council is best placed to plan and respond to local climate change and to use its services and resources to help local communities and businesses build resilience to the impacts. Section 2.3 of the DWCDP outlines the considerations towards climate change in Wexford, it is noted that research at national level has shown that changes in Ireland's climate are in line with global trends. Under this the noted impacts include:

- sea level rise,
- more intense storms and rainfall events,
- increased likelihood and magnitude of river and coastal flooding,
- water shortages in summer in the east
- adverse impacts on water quality
- changes in distribution of plant and animal species
- effects on fisheries sensitive to changes in temperature

The following relevant objectives are included within the DWCDP:

- Objective CA04: To implement the Energy Strategy contained in Volume 10 of the Wexford County Development Plan to facilitate the transition to a low carbon county.



- Objective CA12: To support the decarbonisation of the energy sector by supporting the implementation of the National Energy Efficiency Action Plan and investment in initiatives to improve energy efficiency and future proof the county’s residential, commercial, industrial, agricultural and public building stock, including retrofitting in urban and rural areas and reduction in fuel poverty. The Council will also support the development of sustainable buildings that achieve certification under systems such as the Home Performance Index and Leadership in Energy and Environmental Design.
- Objective ED76: To develop the county as a leading innovator in the green economy in areas such as sustainable agriculture, sustainable construction, the production of renewable energy and the bio-economy, and to support development of enterprises and technologies that employ green technologies and support a low carbon economy.

#### 2.4.3.2.1 **Draft Wexford Wind Energy Strategy 2021-2027**

Volume 10 of the DWCDP provides the Draft Energy Strategy (DES) for the county over the lifetime of the plan and sets out the relevant policy context, renewable energy targets before discussing Solar Energy, Onshore Wind Energy, Bioenergy, other renewable energy sources and supporting infrastructure. The Energy Strategy recognises the importance of not only generating and supplying energy by renewable means but balancing this with more energy efficient practices. The aim per the DES is that County Wexford will become a ‘self-sustaining County’ which essentially means meeting all of its energy needs from renewable resources. Overall, the energy expectation for Wexford are as follows:

- A reduction in demand for non-renewable energy sources, such as coal, oil and gas, and an increased demand for electricity from all sectors, leading to cleaner, more sustainable energy usage across the county.
- A significant increase in the demand for electricity is predicted resulting in a decrease in demand for fossil fuels. A major factor in this will be the Transport sector, as electric cars are developed and become more widespread, the oil usage contributed by the sector is projected to decrease.
- A significant reduction in the use of coal and peat for home heating is anticipated due to advances in home heating technology, improvements in home insulation and new laws restricting the burning of fossil fuels for home heating due to environmental and climate change obligations.

The strategic aims of the DES are:

- To support the attainment of national renewable energy targets and to position the County as a leader in renewable energy generation.
- To identify opportunities for various renewable energy technologies and resources and identify broad areas suitable for their development in full compliance with the requirements of all environmental legislation including the requirements of the Strategic Environmental Assessment Directive, the Habitats Directive and the Water Framework Directive.
- To maximise the opportunities for renewable energy development whilst safeguarding the environment and existing residential amenities.
- To provide guidance on energy efficiency and conservation.
- To provide a clear development management framework.

In terms of the renewable energy status of the county it is noted that onshore wind is the main source of renewable energy for the County with 182.5MW installed energy. While this is the case the DES notes that *‘there is a high renewable energy resource potential which has not yet been exploited’*. Additionally, it is noted that *‘Ireland has one of the most favourable climates for harnessing wind energy in Europe’* with wind energy being the largest contributor to renewable electricity generation in the country to date. The key objectives of the Wind Chapter of the DES are as follows:

- Ensure the security of energy supply by supporting, in principle and at appropriate scales and locations, the development of wind energy resources in the county
- Promote the development of wind energy and other renewable energy sources in the county to meet national renewable energy targets (supplying a minimum of 70% of electricity consumption from renewable sources by 2030).
- Enable County Wexford to make the initial steps toward a low carbon economy by 2030 and generate the equivalent of 100% of its electricity needs from wind energy.

Similar to the current Wexford County Development Plan 2013-2019 there has been three designation areas set within the DES, acceptable in principle (AIP), open to consideration(OTC) and not normally permissible (NNP). It is noted that the AIP and OTC areas within the relevant draft mapping are broadly consistent with those of the current map. Consistent with the current map the Draft Energy strategy map (DES Map no. 14) also locates the subject site within an area which has been designated as ‘not normally permissible’. This area is described as under Table 8 of the DES:

*“This area is considered to be generally unsuitable for wind farm development due to significant environmental, heritage and landscape constraints, housing density, distance from the grid and/or wind speed. Individual small scale turbines will be considered on a case-by-case basis for local community needs. Applications for re-powering (by replacing existing wind turbines) and extension of existing wind farms will be assessed on a case-by-case basis and will be subject to the development management standards contained in Section 5.7. Any such applications should include details of how best available techniques are to be used to keep noise impacts to a minimum. When assessing planning applications for repowering or extensions to existing wind farms against the development management standards, the planning authority will have particular regard to the reasons why the area was identified as ‘Not Normally Permissible’ in Section 5.5”*



Plate 2.6 Draft Wexford Wind Energy Strategy 2021-2027 (General Site Location Indicated with Star)

While the subject wind farm is within an area designated as NNP, similar to the current plan there is a provision in place where applications for re-powering and extension of existing/permitted wind farms to be assessed on a case-by-case basis on their own merits. This is discussed further under Section 2.4.3.3 of this report.

The following wind energy objectives are listed within the DES:

- Objective ES06 Ensure the security of energy supply by supporting the development of wind energy resources in County Wexford at appropriate scales and in appropriate locations, subject to compliance with normal planning and environmental criteria and the development management standards contained in Section 5.7.
- Objective ES07 Aim to achieve the target set out in the Renewable Energy Strategy, to enable County Wexford to make the initial steps toward a low carbon economy by 2027.
- Objective ES08 Facilitate wind energy development on appropriate sites in the county and work with the relevant agencies to encourage investment in research and technology associated with wind farms and other renewable energy technology.
- Objectives ES14 Consider the re-powering (by replacing existing wind turbines) and extension of existing wind farms. Applications on such sites will each be assessed on their merits, demonstrate that the equipment is upgraded to the best available technology and will be subject to the development management standards contained in Section 5.7 (see Table 8).

Additionally, the following development management standards for the replacement, re-powering and redevelopment are noted within the DES:

- Proposals for replacing existing turbines or for the re-powering or redevelopment of existing wind energy developments will be considered. Such proposals will generally require planning permission, unless it can be demonstrated to the satisfaction of the Planning Authority that changes are of a sufficiently minor nature, would not constitute a material change to the development and would not generate additional impacts.
- Applications for re-powering (by replacing existing wind turbines) and extension of existing wind farms in the Not Normally Permissible areas will each be considered on their merits (see Table 8).

### 2.4.3.3 Summary Conclusion on Local Policy

In summary the County Development Plan fully recognises the importance of combating climate change and deriving more energy from renewable sources. Additionally, the Planning Authority acknowledge the role which renewable energy, and (specifically in the context of the Proposed Development) wind energy, has to play in Ireland meeting its energy and climate targets.

As per both the current and draft Wexford County Development Plan the subject site is located within an area which has been designated as ‘not normally permissible’, while this is the case and as noted above there are a number of circumstances where the planning authority will assess an application on a case-by-case basis including in instances of re-powering and extension of existing/permitted wind farms. As noted, the proposed application is seeking to extend the life of the existing Carnsore Wind Farm for an additional 15 years. In this regard the Proposed Development is seeking to prolong the operating period of generating renewable energy from a permitted wind farm development which essentially pre-dates the current development plan provisions.

The current use is well established, the existing wind farm has been operational for in excess of 19 years and the current proposal is to extend the operational period of this renewable energy development without need for any significant additional works. The Proposed Development will allow for the existing turbines to be maintained and continue to operate on-site, and therefore continue to contribute to achieving national targets. Having been previously permitted under ABP Ref. PL26.116487 the principle for wind energy development at this site is already well established and has been proven to be in accordance with the proper planning and sustainable development of the area. In this regard, we wish to note the following favourable considerations with respect to the Proposed Development:

- Landscape Considerations  
 The subject site is already the site of an existing wind farm development, the current application as such will not be introducing a new feature on the landscape. As is noted within Chapter 13 of this EIAR “*the Proposed Development and associated infrastructure*”

*was well designed and reads coherently within its landscape setting in terms of its layout, spatial extent and scale”. Additionally, it should be noted that some visual impacts do arise in locations where there is little screening however the siting, design and scale of the turbines is considered appropriate, as the turbines are only visible locally and they do not obscure views or vistas of the coast or sea. The landscape assessment carried out as part of this EIAR concludes that the “Proposed Development and its continued operation will not have significant landscape or visual effects”.*

- Proximity to Dwellings

With respect to proximity to dwellings there are no residential dwellings located within 300 metres (4 times tip height) from the nearest proposed turbine location. In this instance the nearest property to any of the turbines is 314m which is outside of the 4 times tip height range.

- Ecological Designations,

NIS CONCLUSION

A Natura Impact Statement (NIS) has been prepared to accompany the proposed planning application. In assessing the Proposed Development, it was the conclusion of the NIS that:

*‘The NIS concludes that there would be no adverse effects on the integrity of the European sites assessed in the Appropriate Assessment as a result of the continued operation of the wind farm. It is considered that the continued operation of the wind farm would not be significantly detrimental to the fulfilment of the conservation objectives for the Lady’s Island Lake SPA, Wexford Harbour and Slob’s SPA, The Raven SPA and Saltees Island SPA, nor would it affect the ability of the populations of SPA species of these European sites to survive at their current conservation status.’*

- Grid Connection

The Carnsore Wind Farm is a currently operation wind farm development which has been operating since 2002. The Carnsore Eind Farm is a current supplier to the national grid and as such grid connection or proximity to grid connection is not an issue. The 38kV grid connection was permitted by ABP in September 2001 (ABP Ref. PL26.124600) and is composed of approximately 1.2km of buried 38kV transmission line and approximately 11.2km of overhead line, running in a general north and northwest direction from the wind farm to the Killinick 38kV substation, located at the junction of the R740 and N25, approximately 9.4km northwest of the wind farm (straight line distance).

- Wind Speed

The Carnsore Wind Farm is a currently operation wind farm development which has been operating successfully since 2002 so wind speeds in this context are not an issue. Based on a review of the Wexford Wind Energy Strategy 2013-2019 (Map NO.2) the subject site is located within an area which benefits from some of the highest wind speeds within the County.

There is a range of policy in place within the current and draft county plans which strongly support the development of new and increased penetration of renewable energy onto the national grid. Chapter 6: Biodiversity, and Chapter 13: Landscape of this EIAR demonstrate that the Proposed Development will not give rise to significant adverse impacts on natural heritage, landscape or visual amenity. Chapter 11: Noise, and Chapter 5: Population and Human Health also show that the Proposed Development will not give rise to significant adverse impacts on residential amenity. Accordingly, the Proposed Development is consistent with the aims and objectives of the Wexford County Development Plan 2013-2019 as well as the Draft Plan provisions.

## 2.4.4 Other Relevant Guidelines

### 2.4.4.1 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. The Department of the Environment, Community and Local Government published proposed revisions to the guidelines in December 2013 as part of a targeted review relating to Noise, Proximity and Shadow Flicker for discussion. The Department is continuing this review and Draft Revised Guidelines were published in December 2019.

### 2.4.4.2 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 that 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.”*

### 2.4.4.3 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.

### 2.4.4.4 IWEA Best Practice Guidelines for the Irish Wind Energy Industry 2012

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

### 2.4.4.5 IWEA Best Practice Principles in Community Engagement 2013

Following on from the IWEA published Best Practice Guidelines in March 2012, the Association extended its guidance with the publication of this Best Practice in Community Engagement and Commitment. IWEA and its members support the provision of financial contributions by wind farm operators to local communities and have sought to formulate best practice principles for the provision of a community commitment. The document sets out IWEA's best practice principles for delivering extended benefits to local communities for wind farm developments of 5 Megawatts (MW) or above. Best Practice Principles of community engagement when planning the engagement strategy and preparing associated literature are also outlined in the document. The aim of these guidelines is to ensure that the views of local communities are taken into account at all stages of a development and that local communities can share in the benefits.

Further details on the community engagement that has been undertaken as part of the Proposed Development are presented in Section 2.6.3 below.

#### 2.4.4.6 **Code of Practice for Wind Energy Development in Ireland- Guidelines for Community Engagement 2016**

In December 2016, the Department of Communications, Climate Action and Environment (DCCAE) issued a Code of Practice for wind energy development in relation to community engagement. The Code of Good Practice is intended to ensure that wind energy development in Ireland is undertaken in adherence with the best industry practices, and with the full engagement of local communities. Community engagement is required through the different stages of a project, from the initial scoping, feasibility and concept stages, right through construction to the operational phase. The methods of engagement should reflect the nature of the project and the potential level of impact that it could have on a community. The guidelines advise that ignoring or poorly managing community concerns can have long-term negative impacts on a community's economic, environmental or social situation. Not involving communities in the project development process has the potential to impose costly time and financial delays for projects or prevent the realisation of projects in their entirety. Community engagement in relation to the Proposed Development is discussed in full in Section 2.6.3 below.

#### 2.4.4.7 **Commission for Regulation of Utilities: Grid Connection Policy 2018**

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. Applicants for new connection capacity under ECP-1 was published in August 2019 and under ECP-2 published in September 2020. Round ECP-2.2 is due to be published in September 2021, and ECP-2.3 in 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 renewable energy projects including wind farms had an opportunity to secure a new grid connection offer.

This planning application for the wind farm’s extension of operational period does not include the pre-existing connection to the national electricity grid. The 38kV grid connection was permitted by ABP in September 2001 (ABP Ref. PL26.124600) and is composed of approximately 1.2km of buried 38kV transmission line and approximately 11.2km of overhead line, running in a general north and northwest direction from the wind farm to the Killinick 38kV substation, approximately 9.4km northwest of the wind farm (straight line distance). No changes to the grid connection infrastructure are anticipated and the ESB have confirmed that the Proposed Development will continue to deliver power to the National Grid for the proposed operational extension of 15 years.

#### 2.4.4.8 **Renewable Energy Support Scheme (RESS)**

The Climate Action Plan, published in June 2019, 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 70% 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. Terms and Conditions for the first competition (RESS 1:2020) was published in February 2020 and will provide support to renewable electricity projects in Ireland. It is intended that the RESS will deliver, amongst other policy objectives:

*“An ambitious renewable electricity policy to 2030 increasing energy security, energy sustainability and ensuring the cost effectiveness of energy policy.”*

The Auction Scheme and the ECP framework has now been established and is operational and will facilitate and provide a pathway to realise the for renewable electricity (RES-E) ambition of up to 70% by 2030, that has been established.

## 2.4.4.9 Draft Guidelines

### 2.4.4.9.1 DoEHLG Wind Energy Guidelines 2006 (Revisions)

Further to the noted in Section 2.4.4.2 it should be acknowledged that the Department of the Environment, Community and Local Government published proposed revisions to the 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.

### 2.4.4.9.2 Draft Revised Wind Energy Development Guidelines, December 2019

The Department of Housing, Planning and Local Government published the *Draft Wind Energy Guidelines* (referred to as the Draft Revised Guidelines) in December 2019 and these Draft Guidelines were under public consultation until 19<sup>th</sup> February 2020. 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.

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

- Acceptable noise thresholds and monitoring frameworks;
- Visual amenity setback 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.

## 2.5 Planning History

This Section of the EIAR 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.

### 2.5.1 Applications within the Site

Planning applications which are recorded as being within the application redline boundary are set out in Table 2-1 below. Planning permission was granted for the erection of the currently operational Carnsore Wind Farm by An Bord Pleanála under PL26.116487. The Carnsore Wind Farm is

operational and has been since 2002 when it was commissioned. The wind farm has been generating renewable electricity and supplying to the national grid over the last 19 years.

Table 2-1: Applications within the Application Site

Pl.Ref	Description	Decision
98/0301	Erection of a wind farm development will consist of sixteen wind turbines with associated roads, control-room and electrical compound.	Granted by WCC. Granted by An Bord Pleanála (116487) 07/06/2000
2000-3914	Erect a 38kV overhead line from a new steel mast in an existing 38kV station in the townland of ballybrennan little to a new steel mast in the townland of Summerstown.	Granted by WCC, Granted by An Bord Pleanála (124600)
2016/1337	Permission for (a) retention of a 50m high meteorological mast (b) development of 153 sq.m compound containing a 18.3 sq.m site cabin with an air sampling mast mounted on that cabin to an overall height of 10m.	Granted by WCC 01/02/2017

## 2.5.2 Wind Energy Applications within 20km Site Radius

The planning history of other relevant wind farm developments in the general vicinity of the Proposed Development are listed below, where there are ancillary applications related to renewable energy, details of these have also been provided in the interests of completeness. The wind farm development applications listed below are all within a 20-kilometre radius of the site of the current proposal.

Table 2-2 Wind Energy Applications within 20km of the Development Site

Pl.Ref	Description	Decision and status
<b>Ardcavan Business Park Single Turbine</b>		
2011/0289	Erection of wind turbine mast (18.7m high) with training platform (2.1m high) and sample blade (non rotating) to be used for the provision of training together with associated site development works	Granted by WCC 24/05/2011
<b>Teagasc Single Turbine at Johnstown</b>		
2010/1028	Erection of an 800kW wind turbine with associated site works consisting of fence, concrete slab, transformer and planting of semi-mature trees. the turbine hub will be 50m high with 24m blade extension at highest point (74m max. height)	Granted by WCC 11/01/2011
<b>Richfield Wind Farm</b>		
2000/3983	Erect 27 wind turbines not exceeding 60 metres in height with a rotor diameter not exceeding 60 metres and ancillary buildings and incidental site works to improved existing access road. The wind farm will have an anticipated output of 20MW.	Granted by WCC Granted by An Bord Pleanála (124447) 12/03/2002
2003/0817	Construct a 16 turbine wind farm and ancillary buildings, incidental site works and access roads	Granted by WCC 02/05/2003
2004/0451	Construct a 38kV ESB substation and perimeter fence and incidental site works (to service Richfield windfarm)	Granted by WCC 14/06/2004
2004/1246	Construct a two turbine extension, ancillary buildings, incidental site works and access roads to the existing sixteen turbine windfarm site. the turbines shall have a maximum hub height of 70m and a maximum rotor diameter of 72m. The anticipated minimum output will be 3MW.	Granted by WCC 09/07/2004

Pl.Ref	Description	Decision and status
2005/0156	Construct an 18 turbine wind farm and ancillary buildings, incidental site works and access roads, in the towns of Riesk, Newtown, Richfield (reclaimed), Richfield and Inish and Ballyteige Slob.	Granted by WCC 16/08/2005

### 2.5.3 Applications within the Vicinity of the Wind Farm

There have been a number of planning applications (i.e. non-wind farm applications) lodged within the general setting of the proposed wind farm. In general, the planning applications identified following a review of the Wexford County Council planning portal appear to be for the development of housing, agriculture and community facilities. The applications identified within 2km of the site are presented in Appendix 2-1.

## 2.6 Scoping and Consultations

### 2.6.1 Scoping

Scoping is the process of determining the content, depth and extent of topics to be covered in the environmental information to be submitted to a competent authority for projects that are subject to 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 alterations are more likely to be easily incorporated. In this way scoping not only informs the content and scope of the EIAR, but it also provides a feedback mechanism for the project proposal itself.

A Scoping Request was issued by MKO in relation to the Proposed Development on 6<sup>th</sup> May 2021. The Scoping Document issued provided information on the topics below and is included in this EIAR as Appendix 2-2.

- Description of the Proposed Development Site
- Project Background
- Climate and Renewable Energy Policy
- Designated Areas
- Scope of the EIAR and Natura Impact Statement (NIS)

### 2.6.2 Scoping Responses

Consultees to whom the scoping document were sent and the responses received to date are summarised in Table 2-3 and presented in Appendix 2-3. If further responses are received, the comments of the consultees will be considered in the operation 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 2-3 Scoping Responses

No.	Consultee	Scoping Response Date	Scoping Response
1	An Taisce	None received	No response
2	Bat Conservation Ireland	None received	No response
3	BirdWatch Ireland	None received	No response
4	Broadcasting Authority of Ireland (BAI)	06.05.2021	The BAI confirmed by email that they are not aware of any issues from existing windfarms into existing FM (Frequency Modulation) networks. Also, the proposed windfarm is not located close to any existing or planned FM transmission sites.
5	Butterfly Conservation Ireland	None received	No response
6	Commission for Regulation of Utilities (CRU)	None received	No response
7	Department of Agriculture, Food and the Marine (DAFM)	07.05.2021	Response received from Felling Section, at the DAFM. Response requests that a felling license must be obtained in the case of any planned tree removal. <ul style="list-style-type: none"> <li>No tree felling is proposed as part of this project.</li> </ul>
8	Department of the Environment, Climate and Communications (DECC)	None received	No response
9	Department of Defence (DoD)	07.05.2021	Acknowledgement of receipt of scoping document.
10	Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media	10.05.2021	Acknowledgement of receipt of scoping document from the Development Applications Unit (DAU).
11	Department of Transport	None received	No response
12	Eirgrid	07.05.2021	Acknowledgement of receipt of scoping document.
13	Fáilte Ireland	10.05.2021	Provided a copy of the Guidelines for the treatment of tourism in an EIS, which they

No.	Consultee	Scoping Response Date	Scoping Response
			<p>recommended be taken into account in preparing the EIAR.</p> <ul style="list-style-type: none"> <li>Please refer to Chapter 5 of the EIAR, Population and Human Health</li> </ul>
14	Geological Survey of Ireland (GSI)	13.05.2021	<p>Response received from the Geological Mapping Unit at GSI requesting available information of previous site investigations in an effort to update the National Geotechnical database.</p> <ul style="list-style-type: none"> <li>Previous site investigation/EIS reports submitted to GSI.</li> <li>Please refer to Chapter 8: Land Soils and Geology which provides related details of existing site subsurface conditions.</li> </ul>
15	Health Service Executive, South Regional Forum	None received	No response
16	Iarnród Éireann	None received	No response
17	Inland Fisheries Ireland	None received	No response
18	Irish Aviation Authority	None received	No response
19	Irish Raptor Study Group	None received	No response
20	Irish Water	02.06.2021	<p>Response received regarding general suggested scope of EIAR in relation to Water Services. No specific recommendations related to the Proposed Development.</p> <ul style="list-style-type: none"> <li>Please refer to Chapter 4 and Chapter 9 of the EIAR which provide details concerning water services and the water environment.</li> </ul>
21	Irish Wildlife Trust	None received	No response
22	National Transport Authority	None received	No response

No.	Consultee	Scoping Response Date	Scoping Response
23	Office of Public Works	None received	No response
24	Rosslare Europort Authority	None received	No response
25	Sustainable Energy Authority of Ireland	None received	No response
26	The Heritage Council	None received	No response
27	Transport Infrastructure Ireland (TII)	18.05.2021	<p>Response received from TII regarding their general guidance to be considered in the preparation of an EIAR, in relation to issues that may affect the national road network.</p> <ul style="list-style-type: none"> <li>• Please refer to Chapter 14 of the EIAR which includes details concerning traffic and transportation.</li> </ul>
28	Planning Department, Wexford County Council	17.05.2021	<p>Acknowledgement of receipt of scoping document and request for additional pre-planning meeting with Wexford County Council Planning Section.</p> <ul style="list-style-type: none"> <li>• Please refer to Chapter 2, Section 2.6.3 of the EIAR for further details regarding pre-planning consultation with Wexford County Council.</li> </ul>
29	Roads Department, Wexford County Council	None received	No response
30	Environment Department, Wexford County Council	None received	No response
31	Heritage Office, Wexford County Council	None received	No response
32	Water Services, Wexford County Council	10.05.2021	Acknowledgement of receipt of scoping document.

## 2.6.3 Planning Consultation and Process

### 2.6.3.1 Pre-Planning Consultations with Wexford County Council

Pre-planning meetings took place between officials from Wexford County Council (WCC) and the Hibernian Project Team in July 2020 and June 2021. At those meetings WCC indicated that in principle, an extended lifetime of the wind farm in its current form would be acceptable to the planning authority but the application would have to be accompanied by an EIAR and a Natura Impact Statement (NIS), and would be assessed in accordance with the requirements of the Wexford County Development plan and prevailing planning legislation.

### 2.6.3.2 Community Consultations

As this is a long-established wind farm (in operation since 2002) it is well known by local people in the community, particularly as it is accessible to the public for walking in the area. As this is an application to extend the life of the existing Carnsore Wind Farm and as no amendments are being proposed to the layout, ESB considered that community consultations should be tailored to reflect that context.

To date, community consultations consist of a hand delivered letter drop made on 23rd June 2021 to all dwellings within 2 km of the wind farm, advising of the forthcoming planning application to be made to Wexford County Council. The letter has a dedicated email address [carnsorewf@esb.ie](mailto:carnsorewf@esb.ie) for general queries or observations. A copy of this letter is included as Appendix 2-4 to the EIAR.

As a large number of seasonal mobile homes in this vicinity are located in mobile home parks, it was considered more practical in these instances to hand deliver multiple copies of the same letter to the park manager (at Carne Beach Caravan Park) and request that these be prominently displayed at the reception. In addition, the park manager was requested to display the same letter (and was provided with A3 size copies) on the park noticeboard.

A public project website has been set up ([www.carnsorewindfarm.ie](http://www.carnsorewindfarm.ie)). The website shall have all planning related documents for this project. The website provides details as to how the public can submit general queries by either email, telephone or post. Local Councillors (from Rosslare District & Wexford Borough Councils) were also informed by email on 22nd June 2021 about the Proposed Development. Further online public consultation shall be facilitated throughout the remainder of the planning process.

### 2.6.3.3 Community Gain Proposal

Carnsore Wind Farm has the potential to bring significant positive benefit to the local community. It will contribute annual commercial rates of in excess €195,000 per annum, to Wexford County Council. In excess of €3,000,000 has been paid in commercial rates to Wexford County Council since the wind farm was first commissioned. This will assist the council in the provision of services in Co. Wexford. The Proposed Development can maintain current levels of direct employment (2-3 part-time staff) arising from the wind farm's operation and maintenance.

ESB are currently in discussions with Wexford County Council with a view to maximising the public amenity and historic value of the site.

### 2.6.3.4 Community Benefit Fund

A community benefit fund shall remain in place for the operational lifetime of the wind farm to provide direct funding to those areas surrounding the project site.

The existing community benefit fund of €11,900 per annum shall continue to remain payable, to approved local projects, during the operational life, of this windfarm.

## 2.7 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.

### 2.7.1 Methodology for the Cumulative Assessment of Projects

To gather a comprehensive view of cumulative impacts on the above environmental considerations and to inform the EIA process being undertaken by the consenting authority, each relevant chapter within the EIAR addresses the potential for cumulative effects to arise.

The potential cumulative impact of the proposed 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 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.

### 2.7.2 Projects Considered in Cumulative Assessment

The projects considered in relation to the potential for cumulative impacts arising from construction, operational and decommissioning phases of the proposed development and for which all relevant data was reviewed include those listed below.

#### Other Wind Turbines

There are a number of other wind farm developments located within a 20-kilometre radius of the proposed development site. The other wind farm developments have been listed and included under Section 2.5 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.



## Other Developments/Landuses

The review of the Wexford 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 under Appendix 2-1. These applications have also been taken into account in describing the baseline environment and in the relevant assessments.

Furthermore, the cumulative impact assessments carried out in each of the subsequent chapters of this EIAR consider all potential significant cumulative effects arising from all land uses in the vicinity of the proposed development. Overall, the proposed development has been designed to mitigate impacts on the environment and particularly water, and a suite of mitigation measures is set out within the EIAR. The mitigation measures set out in this EIAR have been developed to ensure that significant cumulative affects do not arise during construction, operational or decommissioning phases of the proposed development. Additional detail in relation to the potential significant cumulative effects arising and, where appropriate, the specific suite of relevant mitigation measures proposed are set out within each of the relevant chapters of this EIAR.