

2 BACKGROUND TO THE PROPOSED PROJECT

This section of the EIAR presents information on renewable energy and climate change policy and targets, the strategic planning context for the Proposed Project, a description of the Proposed Project site and planning history, scoping and consultation, and the cumulative impact assessment process.

2.1 Renewable Energy Policy and Targets

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 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, www.seai.ie).

A gradual shift towards increasing our 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 69% of Ireland's dependency in 2016 at an estimated cost of €3.4 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. Renewable energy development has reduced Ireland's energy import dependency from 88% in 2015 to 69% in 2016. As a result, the energy import bill for Ireland fell from €4.6 billion in 2015 to €3.4 billion in 2016 showing the progression in Ireland's reduction of imported fossil fuels. ('Energy in Ireland 1990 - 2016', Sustainable Energy Authority of Ireland, 2017).

2.1.2 EU Legislation

The European Union (EU) Directive on the Promotion of the Use of Energy from Renewable Sources (Directive 2009/28/EC) was adopted on 23rd April 2009. This Directive establishes a binding target of a minimum 20% reduction in greenhouse gas emissions based on 1990 levels, 20% of overall EU energy consumption to come from renewable sources by 2020, as well as a binding 10% minimum target for energy from renewable resources in the share of transportation fuels and 20% reduction in primary energy use compared with projected levels by improving energy efficiency.

Directive 2009/28/EC legally obliges each Member State to:

- Ensure that its 2020 target is met.
- Introduce “*appropriate measures*” and outline them in a National Renewable Energy Action Plan (NREAP). The “*appropriate measures*” include ensuring that grid-related measures and administrative and planning procedures are sufficient to achieve the 2020 target. The NREAP for Ireland was published in June 2010.

Failure to meet EU targets on the use of energy from renewable sources could result in substantial EU sanctions.

Ireland’s mandatory target under Directive 2009/28/EC is for renewable resources to account for 16% of total energy consumption by 2020. This is to be met by 40% from renewable electricity, 12% from renewable heat and 10% from the renewable transport sector.

The 2030 Climate and Energy Framework was adopted by EU leaders in October 2014 and marks a further development of EU renewable energy policy. The framework defines further EU wide targets and builds on the 2020 climate and energy package.

The Framework sets three key targets for the year 2030:

- A binding commitment at EU level of at least 40% domestic Green House Gas reduction by 2030 compared to 1990;
- An EU wide, binding target of at least 32% renewable energy by 2030; and
- An indicative EU level target of at least 27% energy efficiency by 2030.

Ireland currently has no national targets for 2030 and the process of allocating the EU targets at Member State level has been ongoing since 2014. The European Commission published its proposal for an effort sharing regulation on the allocation of national targets for greenhouse gas emissions for the period 2021-2030 in July 2016. The proposal implements EU commitments under the Paris agreement on climate change (COP21) which is discussed below in Section 2.2.3.2 and marks 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. Arising from a statement on the 14th of June 2018 the European commission has agreed to increase the EU wide target and sets a new, binding, renewable energy target for 2030 of 32%, including a review clause by 2023 for an upward revision of the EU level target.

2.1.2.1 Progress on Targets

The contribution of renewables to gross final consumption (GFC) was 9.5% in 2016, compared to a 2020 target of 16%. In 2016, with four years to go, Ireland was just over halfway towards each of the separate targets for contributions of renewable energy in electricity, transport and heat (‘Energy in Ireland 1990 – 2016’, Sustainable Energy Authority of Ireland, 2017).

The European Commission report ‘*Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions*’ was published in February 2017. This report provides a comprehensive overview of renewable energy deployment in the EU and progress towards meeting the 2020 targets. The report states that the vast majority of Member States are “well on track in terms of renewable energy deployment”. Four Member States, of which Ireland is one, along with Luxembourg, the Netherlands and the

United Kingdom are currently projected not to meet their national binding targets. The United Kingdom’s expected gap is however very short (approximately 0.2%) so it is expected that Ireland will be one of only three Member States projected to not meet their national binding 2020 targets.

Plate 2.1 below shows the latest data available for the share of renewable energies in gross final energy consumption according to the Eurostat online data and the targets that have been set for 2020. The share of renewables in gross final energy consumption stood at 17.0 % in the EU-28 in 2016.

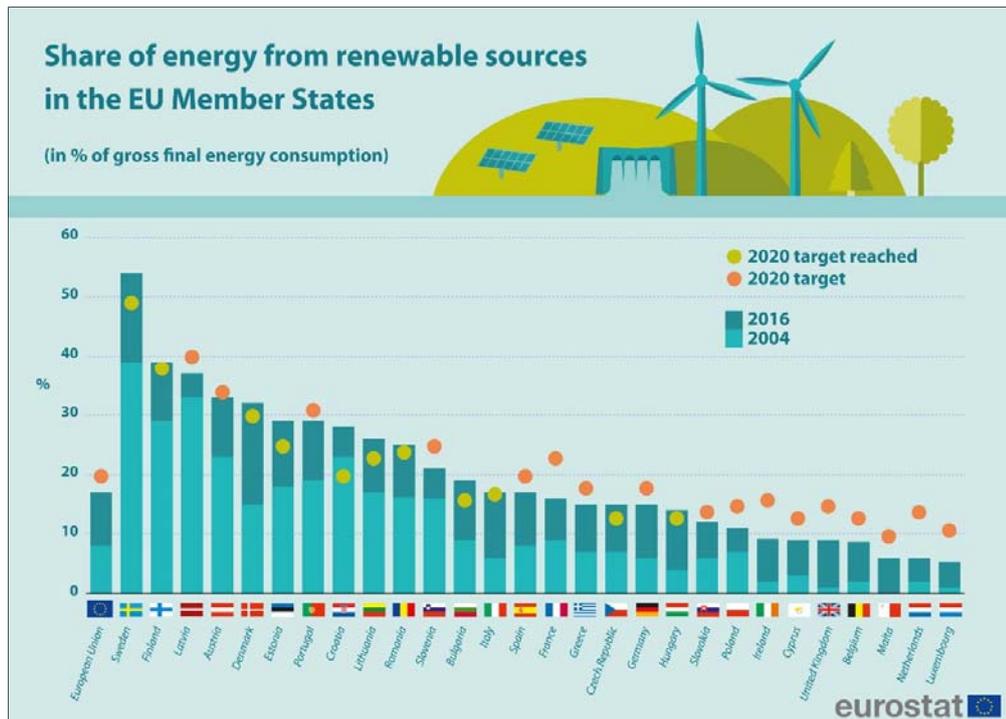


Plate 2.1: Share of renewables in gross final energy consumption, 2016 and 2020 (Source: http://ec.europa.eu/eurostat/statistics-explained/index.php/Renewable_energy_statistics#Further_Eurostat_information)

2.1.3 National Policy

2.1.3.1 Ireland’s Energy Policy Framework 2007 – 2020

A Government White Paper entitled ‘Delivering a Sustainable Energy Future for Ireland: The Energy Policy Framework 2007 – 2020’ was published by the Department for Communications, Marine and Natural Resources in 2007. Currently approximately 69% of Irish energy requirements are imported, as described in Section 2.1.1 above. Combined with our peripheral location, this situation leaves Ireland vulnerable to supply disruption and imported price volatility, as stated in the White Paper. The primary objectives of the Government’s energy policy as set out in the Paper are security of supply, environmental sustainability and economic competitiveness. The Energy Policy Framework 2007 – 2020 sets out clear actions, targets and timeframes for meeting these interlinked objectives.

Ireland’s energy policy priorities are framed in the context of the European Union. Directive 2009/28/EC on the Promotion of the Use of Energy from Renewable Sources sets a target for Ireland for 16% of energy consumption to come from renewable sources by 2020. This target was further increased to 40% by the Minister for Communications, Energy and Natural Resources in 2008 as part of the Government’s

strategy to make the “green economy” a core component of its economic recovery plan.

The Energy White Paper 2007 states that renewable energy will be a critical and growing component of Irish energy supply to 2020 and beyond. The Government’s strategic goals for sustainable energy include addressing climate change by reducing energy-related greenhouse gas emissions and accelerating the growth of renewable energy sources. Renewable energy and enhanced efficiency in power generation are integral to the Government’s strategy to deliver Ireland’s climate change targets under the Kyoto Protocol. The Paper states:

“Renewable energy is an integral part of our climate change strategy and sustainability objectives. The additional diversity which renewables bring to Ireland’s energy demand will also make a direct contribution to our goal of ensuring secure and reliable energy supplies.”

2.1.3.2 Electricity Support Schemes: I-SEM Arrangements Decision Paper

The Department of Communications, Climate Action and Environment (DCCAE) has updated its existing electricity support schemes supported by the Public Service Obligation (PSO) Levy (primarily for renewable energy). In May 2017, DCCAE published an information paper which outlined a number of options being considered as part of this decision-making process and set out the Department’s emerging thinking on the optimal outcome. Having sought stakeholder views in relation to the options being considered (as set out in the May 2017 document) and drawing on the supporting analysis provided by the EirGrid modelling, the DCCAE published its final decisions on these matters in June 2018. The three published decisions are set out below, however, it should be noted that the DCCAE has reserved the right to periodically review the impact of the decisions.

- **Decision 1:** The market revenue calculation for the purposes of calculating the PSO levy for supported wind generation (Alternative Energy Requirement (AER), Renewable Energy Feed In Tariff (REFIT) 1 and 2) will be amended to adapt to the Integrated Single Electricity Market (ISEM). The market revenue calculation for wind generators will, for the energy component, be based on the lower of a blend of 80% of the Day Ahead Market Price and 20% of the Balancing Market Price, and the Day Ahead Market Price for all supported wind generators above 5MW capacity. For supported wind generators below 5 MW, the market revenue Calculation will, for the energy component, be based on the lower of a blend of 70% of the Day Ahead Market Price and 30% of the Balancing Market Price, and the Day Ahead Market Price.
- **Decision 2:** The market revenue calculation for the purposes of calculating the PSO levy for other supported generation (under REFIT 1, REFIT 2, REFIT 3 and the Peat PSO Scheme) will be amended to adapt to the Integrated Single Electricity Market. For these generators (peat, hydro and biomass) supported under the PSO levy, the market revenue calculation for the energy component will be based on the Day Ahead Market Price.
- **Decision 3:** The market revenue calculations for the purposes of calculating the PSO levy for all supported generation will take into account only capacity market revenues and not capacity market costs.

2.1.3.3 National Renewable Energy Action Plan

Article 4 of Directive 2009/28/EC 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.

Ireland's National Renewable Energy Action Plan (NREAP) sets out the Government's strategic approach and planned measures to deliver on Ireland's 16% target under Directive 2009/28/EC. In relation to renewable energies the NREAP states:

"It is noted that as a country, Ireland has immense potential for the development of renewable 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."

2.1.3.4 White Paper on Energy Policy in Ireland 2015 – 2030

On 12th 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 Department of Communications, Energy and Natural Resources. This Paper provides a complete energy update and a framework to guide policy up to 2030. The Paper builds upon the White Paper published in 2007 and takes into account the changes that have taken place in the energy sector since 2007.

The White Paper states the advances in Ireland's energy efficiency and renewable energy and generation use between 2007 and 2015. Renewable energy sources (which include solar) accounted for nearly 27.3%% of Ireland's electricity consumption in 2015, which is just over halfway to meeting Ireland's 2020 target of 40% ('Energy in Ireland: Key Statistics 1990-2015, November 2016).

The policy framework sets out a vision for a low carbon future that maintains Ireland's competitiveness and ensures a supply of affordable energy. 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.

The paper states that solar photovoltaic (PV) technology is rapidly becoming cost competitive for electricity generation, not only compared with other renewables but also compared with conventional forms of generation. The deployment of solar in Ireland has the potential to increase energy security, contribute to our renewable energy targets, and support economic growth and jobs. Solar also brings other

benefits such as having a relatively quick construction duration. Solar technology is one of the technologies being considered in the context of the new support scheme for renewable electricity generation for which the first competition is scheduled to be run in 2019.

2.2 Climate Change Policy and Targets

2.2.1 Impacts of 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 Environmental Protection Agency (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) Programme 2007 – 2013. This report stated that mean annual temperatures in Ireland have risen by 0.7° Celsius (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 changes are less certain to project 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 and more intense downpours and an increased propensity for drought in summer are also projected. The STRIVE report on climate change impacts states that Ireland can and must adapt to the challenge 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.”

The report discusses the impacts of climate change in terms of water resource management, agriculture and biodiversity, as described below.

2.2.1.1 Water Resource Management

The hydrological impacts of projected climate change encompass significant reductions in soil moisture storage in the nine representative catchments across Ireland. Soil moisture deficits commence earlier and extend later in the year as the century proceeds. This will result in a tendency for groundwater recharge to be lower for longer, sustained periods, increasing the risk of drought when a dry Summer follows a drier than average Winter. The STRIVE report states that such impacts would be felt greatest in catchments more dependent on groundwater, such as the Suir, Blackwater and Barrow. Significant changes in streamflow are likely to occur, with implications for flood management in winter and water resource availability in summer:

“In the vital water supply rivers of the east, for example, streamflow reductions in excess of 70% can be expected for some autumn months by the end of the century.”

2.2.1.2 Agriculture

The STRIVE report states that the principal challenges to agriculture will come from wetter Winter and drier Summer soils, though increased temperatures will also play an important role. Different challenges will be posed in different regions, depending on crop type and dairying output. The report stresses however that Irish agriculture can, if positioned appropriately, adapt successfully to the challenges of climate change.

2.2.1.3 Biodiversity and Natural Ecosystems

Changes in species behaviour and viability and in ecosystem distribution across Ireland will occur in conjunction with the projected climate changes. Changes in the timing of life-cycle events such as leafing, bud burst and leaf fall can be expected as preliminary responses and will be instrumental in altering biodiversity. The report states that particularly vulnerable ecosystems can be identified where successful adjustment to new conditions is unlikely. The most vulnerable habitats include sand dunes, lowland calcareous grasslands, montane heath, raised bogs, calcareous fens, turloughs and upland lakes. Increased decomposition of Irish peatlands will be facilitated mainly by cracking during drier periods and will be further exacerbated by compositional changes. The suitable climate area for Fens may have declined by 40% by mid-century with corresponding losses for raised and blanket bogs of over 30% and 45% for turloughs over the same period.

2.2.2 International Policy

2.2.2.1 United Nations Framework Convention on Climate Change

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

Ireland is a Party to the Kyoto Protocol, which is a protocol to the UNFCCC. The Kyoto Protocol is 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. Further details on Ireland's obligations under the Kyoto Protocol are presented below.

2.2.3 Kyoto Protocol Targets

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.

2.2.3.1 Doha Amendment to the Kyoto Protocol

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

- New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 1 January 2013 to 31 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.

2.2.3.2 COP21 Paris Agreement

COP21 was the 21st session of the Conference of the Parties (COP) to the UNFCCC. Every year since 1995, the COP has gathered the 196 Parties (195 countries and the European Union) that have ratified the Convention in a different country, to evaluate its implementation and negotiate new commitments. COP21 was organised by the United Nations in Paris and held from 30th November to 12th December 2015.

COP21 closed on 12th December 2015 with the adoption of the first international climate agreement (concluded by 195 countries including the EU member states 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.

2.2.3.3 Progress on Targets

The *'Europe 2020 Strategy'* is the EU's agenda for growth and jobs for the current decade. The Europe 2020 Strategy targets on climate change and energy include:

- Reducing GHG emissions by at least 20% compared with 1990 levels;
- Increasing the share of renewable energy in final energy consumption to 20%; and
- Moving towards a 20% increase in energy efficiency.

The *'Europe 2020 indicators – climate change and energy'* report (http://ec.europa.eu/eurostat/statistics-explained/index.php/Europe_2020_indicators_-_climate_change_and_energy) provides a summary of recent statistics on climate change and energy in the EU, with reference to the progress of Member States in meeting the required targets. In 2016, EU greenhouse gas emissions, including emissions from international aviation and

indirect carbon dioxide (CO₂) emissions, were down by 22.4% when compared with 1990 levels. The EU is therefore expected to exceed its Europe 2020 target of reducing GHG emissions by 20% by 2020. In 2016, renewable energy provided 17.0% of gross final energy consumption in the EU, up from 9 % in 2005.

While the EU as a whole is projected to exceed its 2020 target of reducing GHG emissions by 20%. The Europe 2020 report emphasises the importance of continued action on climate change:

“Despite the EU’s shrinking share in global CO₂ emissions, recent findings on the potentially catastrophic impacts of climate change confirm the ongoing importance of its climate and energy goals. EU emission cuts alone cannot halt climate change, but if it can show that a low-carbon economy is feasible, and can even increase innovation and employment, it will serve as a role model to other regions. Continuous investment in advanced low-carbon technologies can also help the EU uphold technological leadership and secure export markets. A successful transformation of the energy sector ... is pivotal in this respect.”

2.2.3.4 Emissions Projections

In May 2018, the EPA published an update on Ireland’s Greenhouse Gas Emission Projections 2017-2035. The report provides an assessment of Ireland’s progress towards achieving its emission 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 Measures’ and ‘With Additional Measures’. The ‘With Measures’ scenario assumes that no additional policies and measures, beyond those already in place by the end of 2014 are implemented. The ‘With Additional Measures’ scenario assumes implementation of the ‘With Measures’ scenario in addition to full achievement of Government renewable and energy efficiency targets for 2020, as set out in the NREAP and the National Energy Efficiency Action Plan (NEEAP).

The EPA Emission Projections Update notes the following key trends:

- Ireland’s non-Emissions Trading Scheme (ETS) emissions are projected to be 0%-1% below the 2005 levels by 2020, under the “With Existing Measures and with additional measures scenarios respectively”.
- Ireland has exceeded its annual binding limit for the first time in 2016.
- Over the period 2013 – 2020, Ireland is projected to cumulatively exceed its compliance obligations by approximately 17 Mt CO₂ (metric tonnes of Carbon Dioxide) under the “With Existing Measures” scenario and 16.3 Mt CO₂ under the “With Additional Measures” scenario.

The 2018 EPA report states that “Failure to meet 2020 renewable and energy efficiency targets will result in Ireland’s emission levels moving even further from its emission reduction targets”. The report also finds:

- The latest projections estimate that by 2020 non-ETS emissions will be at best 11% below 2005 levels compared to the 20% reduction target. Emission trends from agriculture and transport are key determinants in meeting

targets, however emissions from both sectors are projected to increase in the period to 2020.

- Ireland is not projected to meet 2020 emissions reduction targets and is not on the right trajectory to meet longer term EU and national emission reduction commitments.

2.2.4 National Policy

2.2.4.1 National Climate Change Adaptation Framework 2012

Ireland's first National Climate Change Adaptation Framework (NCCAF), which was published in December 2012, aims to ensure that adaptation actions are taken across key sectors and also at local level to reduce Ireland's vulnerability to climate change. The NCCAF requires the development and implementation of sectoral and local adaptation plans which will form part of the national response to the impacts of climate change. Each relevant Government Department (or State Agency, where appropriate) are required to prepare adaptation plans for their sectors. Twelve sectors were identified in total including Transport, Flood Defence, Agriculture and Energy. The Climate Action and Low Carbon Development Act 2015 (see Section 2.2.4.3) puts the development of National Climate Change Adaptation Frameworks and Sectoral Adaptation Plans on a statutory basis.

The Climate Action and Low Carbon Development Act 2015 states that following Government approval of the first statutory National Climate Change Adaptation Framework it must be reviewed at least every 5 years after that.

Following approval of the statutory National Climate Change Adaptation Framework 2012, Section 6 of the Act requires the Government to request all relevant Government Ministers to prepare sectoral adaptation plans covering the relevant sectors under their remit within a specified period. The Draft National Adaptation Framework Plan was published in September 2017, for public consultation.

2.2.4.2 National Policy Position on Climate Action and Low Carbon Development 2014

The National Policy Position on Climate Action and Low Carbon Development, published by the Department of Environment, Community and Local Government in April 2014, provides a high-level policy direction for the adoption and implementation by Government of plans to enable the State to move to a low-carbon economy by 2050. The position paper acknowledges that the evolution of climate policy in Ireland will be an iterative process, based on the adoption by Government of a series of national plans over the period to 2050. Statutory authority for the plans is set out in the Climate Action and Low Carbon Development Act 2015.

2.2.4.3 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 Climate Action and Low Carbon Act 2015 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.

2.2.4.4 National Mitigation Plan

Ireland's first statutory National Mitigation Plan (NMP), published in July 2017, gives effect to the provisions of the Climate Action and Low Carbon Development Act 2015, and represents a landmark national milestone in the evolution of climate change policy in Ireland and provides for the statutory basis for the transition to a low carbon, climate resilient and environmentally sustainable economy by 2050.

The NMP reaffirms Ireland's commitment to concerted and multilateral action to tackle climate change following the adoption of the legally-binding Paris Agreement of which Ireland is a co-signatory. Under the Paris Agreement, the EU is committed to reducing greenhouse gas emissions by at least 40% by 2030, compared with 1990 levels. The Paris Agreement represents a landmark accord in tackling climate change, which is recognised by all parties as the defining global issue of this generation.

The NMP outlines a range of measures to lay the foundations for transitioning Ireland to a low-carbon, climate-resilient and environmentally sustainable economy by 2050. The NMP reaffirms Ireland's commitment to action on climate change following the adoption of the legally-binding Paris Agreement of which Ireland is a co-signatory.

The NMP notes that the sharp decline at a global level in the cost of solar photovoltaic (PV) technology has resulted in significant interest in this renewable technology across Europe and in Ireland. They also detail that through the further development of solar PV in Ireland it has the potential to contribute to meeting our renewable energy targets which have been discussed in the above sections.

The NMP addresses the role of local authorities in facilitating the transition towards a low-carbon economy, and recognises that this requires engagement from all levels of Government and that a bottom-up approach is also essential to promote awareness and engagement within individual communities across Ireland.

The NMP further states that there *"is also recognition within the Local Authority sector of the need for the sector to assume a leadership role within their local communities to encourage appropriate behavioural change"*. Moreover, the NMP emphasises that local authorities also have a key role to play *"in addressing climate change mitigation action and are well placed to assess, exploit and support opportunities within their administrative areas, in cooperation with each other and with national bodies, and through the involvement and support of local communities"*.

2.2.4.5 National Planning Framework

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. The NPF has superseded the National Spatial Strategy 2002-2020 (NSS), and includes a focus on economic development and investment in housing, water services, transport, communications, energy, health and education infrastructure. The NPF forms the top tier of the national planning policy structure, accordingly establishing the policy context for the forthcoming Regional Spatial and Economic Strategies and local level development plans. In an effort to move away from developer led development to one

informed by the needs and requirements of society, a number of objectives and policies have been put in place in order for the country to grow and develop in a sustainable manner.

The NPF notes that while the overall quality of the country’s environment is good it is not without challenges. They note that the manner in which we plan for the potential issues is important to challenging them creating a sustainable environment for the future.

“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.”

The NPF seeks to achieve ten strategic priorities surrounding:

1. Compact Growth
2. Enhanced Regional Accessibility
3. Strengthened Rural Economies and Communities
4. Sustainable Mobility
5. A Strong Economy, supported by Enterprise, Innovation and Skills
6. High-Quality International Connectivity
7. Enhanced Amenity and Heritage
8. Transition to a Low Carbon and Climate Resilient Society
9. Sustainable Management of Water and other Environmental Resources
10. Access to Quality Childcare, Education and Health Services

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

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.

Ireland's national energy policy under objective 55 aims to 'promote renewable energy use and generation at appropriate locations within the built and natural environment to meet national objectives towards achieving a low carbon economy by 2050'. Through this it is noted that there are three pillars of focus which must be considered:

- (1) sustainability,
- (2) security of supply,
- (3) competitiveness.

The government recognise that it must reduce greenhouse gas emissions which come from the energy sector by at least 80% by 2050 when compared to 1990 levels while ensuring a secure supply of energy, the NPF notes that our transition requires:

- 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 NPF also highlights the important role which the regions will have in promoting a sustainable renewable energy supply and have been noted as a key future planning and development priority.

Kildare is in the Eastern and Midland Region, Section 3.2 of the NPF discusses this region. Page 35 of the NPF lists eight "*Key future planning and development and place-making policy priorities for the Eastern and midland Region*", one of which states the following (emphasis added):

*"Harnessing the potential of the region in renewable energy terms across the technological spectrum from wind and **solar** to biomass and, where applicable wave energy, focusing in **particular on the extensive tracts of publicly owned peat extraction areas** in order to enable a managed transition of the local economies of such areas in gaining the economic benefits of greener energy"*

Accordingly, it is envisioned that the national strategy will be supported, implemented and translated through the planning hierarchy by the local development plans and regional strategies.

2.2.4.6 Draft Renewable Electricity Policy and Development Framework

The Renewable Electricity Policy and Development Framework (REPDF) has been formulated to ensure Ireland meets its future needs for renewable electricity in a

sustainable manner compatible with environmental and cultural heritage, landscape and amenity considerations (Source: <http://www.dccae.gov.ie/energy/en-ie/Renewable-Energy/Pages/Renewable-Electricity-Policy-and-Development-Framework.aspx>).

REPDF will contribute toward meeting Ireland’s future energy needs, particularly up to 2030 and beyond, as informed by national and European policy, and be reviewed at five-yearly intervals. The REPDF will be primarily for the guidance of An Bord Pleanála, planning authorities, other statutory authorities, the general public and persons seeking development consent in relation to large scale projects for the generation of renewable electricity on land. It will set out policy in respect of environmental considerations, community engagement and in relation to potential, future export of renewable electricity. It will seek to broadly identify suitable areas in the State, where large-scale renewable electricity projects can be developed in a sustainable manner.

The existing system for planning permission applications to local authorities or An Bord Pleanála will remain unchanged in respect of renewable electricity projects. These will still require planning permission, including environmental impact assessment where appropriate. It is proposed that the REPDF will be focused on providing for renewable electricity projects of large scale. It is considered that any project which has a threshold of 50 MW and upwards would be appropriate, having regard to the provisions of the strategic infrastructure development legislation.

The Draft Strategic Environmental Assessment Scoping Report for the Renewable Electricity Policy and Development Framework has been published for consultation which closed on 22nd April 2016. It is being assessed and amended in light of the submissions received. The latest update on the process is that the Department of Communications, Climate Action and Environment have requested tenders (27th of July 2018) for the provision of consultancy services for Environmental Reporting (Strategic Environmental Assessment), Natura Impact Statement (Appropriate Assessment) and related services including spatial planning, landscape character and visual assessment of the Renewable Electricity Policy and Development Framework. The tender deadline has been set for the 7th of September 2018.

2.2.5 Regional and County Policy

2.2.5.1 Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022

The Regional Planning Guidelines (RPG) for the Greater Dublin Area (GDA) formulates public policy for the region covering the administrative areas of Dublin City, Dun Laoghaire Rathdown, Fingal, South Dublin, Kildare, Meath and Wicklow. The Plan provides a long-term strategic planning framework for the sustainable development of the region for a 12-year period up to 2022 and seeks to implement the planning framework set out in the National Spatial Strategy (NSS) published in 2002 whilst providing direction to County Development Plans.

The broad vision for the Regional Strategy is:

“The GDA by 2022 is an economically vibrant, active and sustainable international Gateway Region, with strong connectivity across the GDA Region, nationally and worldwide; a region which fosters communities living in attractive, accessible places well supported by community infrastructure and enjoying high quality leisure facilities; and promotes and protects across the GDA green corridors, active agricultural lands and protected natural areas.”

Chapter 3 of the RPG outlines the Regional Economic Strategy. It states that in order to ensure long-term energy security for the region a focus on alternatives sources such as oil and gas (i.e. non-renewable sources) should be prioritised.

Chapter 6 sets out the key physical infrastructure needs of the Greater Dublin Region which are required to ensure the successful delivery and implementation of the Settlement and Economic Strategies. The strategy notes that *‘the maintenance, adequate provision of, reinforcement and expansion of energy and communication networks is a critical part of securing the region’s future’*. Optimal functioning of these networks is key to the region attracting foreign investment and ensuring affordable energy provision. The transformation to a high technology, energy secure region and country is an ongoing and dynamic process. The RPG’s note that *‘it is imperative for future economic growth and success that this transformation is facilitated in every means possible and that we plan for the energy requirements of an advanced information society, locally, regionally and through a whole government approach recognising the interdependency of a range of factors such as Kyoto’*. Strategic recommendation PIR27 highlights:

“That low carbon sustainable renewable energy systems, bio-energy and energy conservation potentials are exploited to their full potential through the advancement of EU and national policy at regional level and the promotion of existing and emerging green technologies.”

Section 6.6.5 of the RPG’s state:

“Renewable Energy provision within the GDA will continue to become a more central issue in terms of environmental concerns, economic viability and development, and employment creation in green technologies.... The delivery of a sustainable energy future as outlined in the Energy Policy Framework 2007 – 2020 is closely linked to the national climate change policy. Achievement of these national targets will require development of renewable energy options such as off-shore wind generation, marine based energy production, solar energy and geothermal both within, adjacent to, and outside the GDA..... renewable energy provision will assist efforts to meet Kyoto Protocol targets, increase security of supply, and bolster energy supply levels...”

The guidelines recognise that there is a need to fully exploit renewable energy potential in the region in an aim to reduce National dependency on imported fuels for energy provision. This will be to the benefit of the economy as well as the environment. It notes that approximately 5,500 MW of renewable generation by 2020 is required to meet the government target of 40% total consumption from renewable energy sourced electricity.

2.2.5.2 Kildare County Development Plan 2017-2023

The Kildare County Development Plan 2017-2023 (CDP) is the principal instrument that is used to manage change in land use in the County. The CDP sets out the Council’s strategic land use objectives and policies for the overall development of the County up to 2023. This spatially based strategic framework seeks to manage and coordinate change in land use in the County setting out a clear view ahead in development terms together with clear priorities to drive growth. This CDP seeks to encourage the support, facilitation and promotion of sustainable development of renewable energy sources in the county. The County Development Plan notes that

‘living more sustainably is essential if future generations in Kildare are to enjoy an environment equal to or better than the one we experience today. Awareness about sustainable practices is a critical first step in supporting a sustainable county’.

It is a priority of this Plan to support and capitalise on the employment and enterprise potential of the green economy. The plan also aims to support the development of a secure and affordable energy supply and renewable and efficient energy infrastructure (including buildings for business, public sector and the community) to improve competitiveness, security and reduce costs. Chapter 5 notes the following policies and objectives in relation to the economic development of the county over the life of the plan:

ECD 23: *Facilitate and encourage the development of the alternative energy sector and to work with relevant agencies to support the development of alternative forms of energy where such developments are in accordance with the proper planning and sustainable development of the area.*

The council recognises that climate change is one of the biggest issues facing the environment and is widely regarded as being caused by the warming effect of greenhouse gases. Section 8.1 of the CDP notes that:

“The burning of carbon based fossil fuels is responsible for over half of all greenhouse gas emissions globally. These emissions are mainly generated from energy generation, transportation, industry and residential and commercial buildings. European and national energy policy prioritise measures to support climate change resilience, through reduced energy consumption and increasing the proportion of energy consumed from alternative non-polluting, low carbon and renewable energy sources (wind, solar, hydro, and geothermal) across the sectors.”

This CDP aims to support the development of indigenous renewable energy resources and the maximisation of electricity production in a manner that is in accordance with the principles of proper planning and sustainable development. The Council’s strategy aims:

“To support national and EU policy for the provision of new and innovative sources of renewable energy.

To facilitate energy supply and distribution in the county in order to support an efficient and vibrant economy.

To ensure that the location of renewable energy structures should minimise and/or mitigate any adverse visual and environmental impacts on the built or natural environment.

To encourage the improvement of energy efficiency of the existing building stock, and to promote energy conservation in the design and development of all new buildings in the county.

To promote sustainable approaches to residential development through spatial planning, layout, design and construction.”

With the overall increase of energy requirements at a national level and the need to meet binding targets, the Kildare County Development Plan recognises that the

‘electricity supply must be augmented by alternative forms of generation’. The council highlights that there is a range of new and developing technologies that can contribute to minimising greenhouse gas emissions and to securing a greater proportion of our energy needs from renewable resources.

Section 8.7 of the County Development Plan lists the Councils aims, objectives and policies surrounding Solar Energy for the lifetime of the plan. They note that *‘as solar energy technologies have become more effective, areas in northern Europe like Ireland have become viable for technologies including solar panels/tubes on roof spaces and the commercial development of Solar Farms together with storage facilities’.* As a result, solar generated energy is increasingly contributing to a reduction in energy demand and energy costs for a range of commercial, industrial and residential properties. The Council has attached the following policies in relation to solar energy:

SE 1: *Promote the development of solar energy infrastructure in the county, in particular for on-site energy use, including solar PV, solar thermal and seasonal storage technologies. Such projects will be considered subject to environmental safeguards and the protection of natural or built heritage features, biodiversity views and prospects.*

SE 2: *Ensure that the assessment of solar energy development proposals will have regard to:*

–site selection, by focussing in the first instance on developing Solar Farms on previously developed and non-agricultural land, provided that it is not of high environmental value;

–where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays;

–the nature of Solar Farms as normally temporary structures. Decommissioning and site rehabilitation plans will be required providing for the land be restored to its previous use;

–the proposal’s impact through glint and glare on neighbouring uses and on transportation and aviation safety;

–the proposal’s visual and landscape impact and the potential to mitigate these impacts through, for example, screening with native hedges;

–the guidance provided in relation to compatibility with landscape designations of Tables 14.3 and 14.4 of Chapter 14 of this plan;

–the need for, and impact of, security measures such as lights and fencing;

–the need to ensure that heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on protected views and scenic routes etc. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large scale Solar Farms on such

assets, e.g. historic demesnes. Depending on their scale, design and prominence, a large scale Solar Farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;

–the need to consider ecology so as to avoid or minimise damage on important species or protected habitats;

–the energy-generating potential, which can vary for a number of reasons including latitude and aspect;

–the design of the scheme needs to be carefully considered including layout, scale, land cover panel, height, landscaping, access roads, noise, cumulative impacts and the design of ancillary elements;

Landscape Designations

Chapter 14 of the CDP details the landscape designations for the county, Map 14.1 of the CDP (depicted below in Figure 2.1) sets out the various landscape character areas (LCA's) within Kildare. The site of the Proposed Project is located within the Western Boglands LCA. This is listed as a Class 3 landscape of "high sensitivity", on a scale of 5 classes, ranging from Class 1 "Low Sensitivity", to Class 5 "Unique Sensitivity". Therefore, the site of the Proposed Project is mid-range in the scale of landscape sensitivity within County Kildare. In this regard the CDP states Class 3 landscapes are generally:

"Areas with reduced capacity to accommodate uses without significant adverse effects on the appearance or character of the landscape having regard to prevalent sensitivity factors."

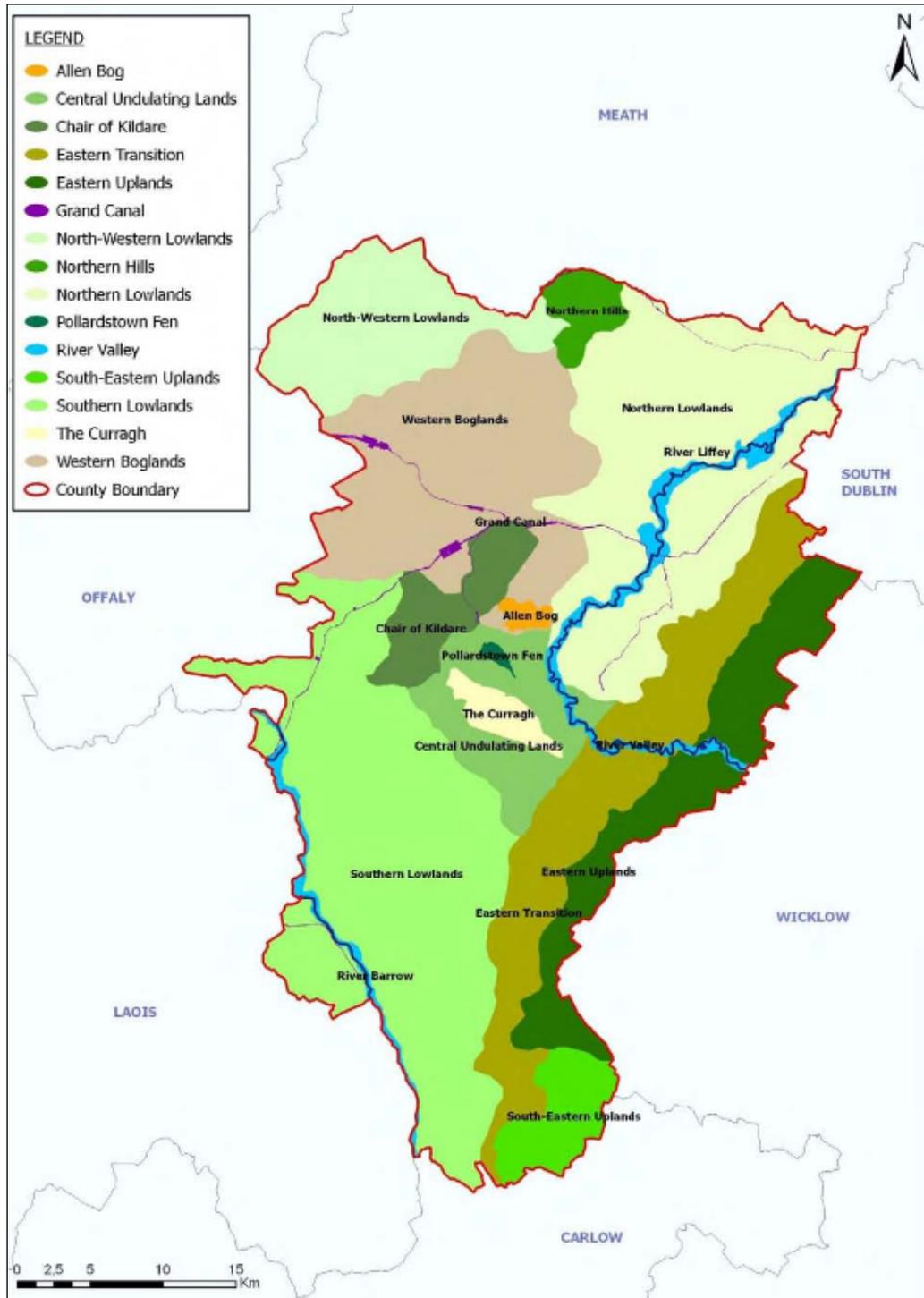


Figure 2.1: Landscape Character Areas

In order to determine the likely perceived impact of a particular development on the landscape Kildare County Council have included table 14.3 in the CDP in which the potential impact of a range of listed developments is viewed in light of the relevant LCAs. Table 14.3 of the CDP is reproduced below as Table 2.1, as can be seen this table details the likely compatibility between a range of land-uses and the principle LCAs. As can be seen from the table below there is a five-point range on the compatibility key from “least compatible” (purple), through low, medium and high, until it reaches “most compatible” (azure blue). The only use that is classified as “most compatible” in the Western Boglands is agriculture, whilst rural housing and urban expansion have

low compatibility, while all other uses (including solar energy) have “medium compatibility”.

Table 2.1: Likely compatibility between a range of land-uses and Principle LCAs.

Compatibility Key		Sensitivity Class	AGRICULTURE AND FORESTRY		HOUSING		URBANISATION			INFRASTRUCTURE		EXTRACTION		ENERGY	
			Agriculture	Forestry	Rural Housing	Urban Expansion	Industrial Projects	Tourism Projects	Major Powerlines	Sand & Gravel	Rock	Windfarm	Solar		
Most	High	Medium	Low	Least											
Principal Landscape Character Areas															
North Western Lowlands	1														
Northern Lowlands	1														
Western Boglands	3														
Eastern Transition	2														
Eastern Uplands	3														
South-Eastern Uplands	2														
Sub-ordinate Landscape Areas															
Northern Hills	4														
Chair of Kildare	4														
The Curragh	5														
Pollardstown Fen	5														
Allen Bog	4														
River Liffey	4														
River Barrow	4														

The CDP also includes table 14.4 (reproduced below as Table 2.2), which identifies the likely compatibility between a range of land-uses and proximity of less than 300m to the principal landscape sensitivity factors. It must be noted that this table is not based on the LCA’s but relates to the primary visual landscape factors such as forestry, moors and heathlands, peat bogs, ridgelines, green urban areas etc. The table uses five categories from “0 – very unlikely to be compatible”, through 2, 3, and 4, up to “5-likely to be compatible in most circumstances”.

Only agriculture, forestry and tourism land uses have merited a compatibility rating of “5” across any of the principal landscape sensitivity factors. Solar development has a compatibility in the range of 0 to 2 across all the various landscape sensitivity factors and in the case of “Peat bogs” has been given a compatibility rating of 1 “compatible only in exceptional circumstances”; in this table. Solar panels are “very unlikely to be compatible – 0” along ridgelines and rivers and waterbodies, while they are “compatible only in certain circumstances – 2” in forestry, grasslands, green urban areas, grasslands and scenic routes/views.

Table 2.2: Likely compatibility between a range of land-uses and proximity to Principal Landscape Sensitivity Factors.

5 - Likely to be very compatible in most circumstances. 4 - Likely to be compatible with reasonable care. 3 - Likely to be compatible with great care. 2 - Compatible only in certain circumstances. 1 - Compatible only in exceptional circumstances. 0 - Very unlikely to be compatible.	Agriculture and Forestry		Housing	Urbanisation			infrastructure	Extraction		Energy	
	Agriculture	Forestry	Rural Housing	Urban Expansion	Industrial Projects	Tourism Projects	Major Powerlines	Sand and Gravel	Rock	Windfarm	Solar
Proximity within 300m of Principal Landscape Sensitivity Factors.											
Major Rivers and Water bodies	5	5	2	2	2	3	2	1	0	1	0
Canals	5	5	2	2	2	3	2	1	0	1	1
Ridgelines	5	5	1	1	1	1	1	0	0	2	0
Green Urban Areas	4	5	2	0	0	4	3	3	3	2	2
Broad Leaved Forestry	3	5	2	2	2	4	3	2	3	1	2
Mixed Forestry	3	5	2	2	2	4	3	2	3	1	2
Natural Grasslands	5	2	2	1	1	4	2	1	1	2	2
Mbors and Heathlands	2	2	1	0	0	1	2	1	0	2	1
Agricultural Land with Natural Vegetation	5	5	2	2	2	3	3	3	3	4	2
Peat Bogs	0	0	0	0	0	0	2	0	0	3	1
Scenic View	5	5	2	1	1	5	1	3	0	0	2
Scenic Route	5	5	2	1	1	5	1	3	0	0	2

The site of the Proposed Project is not a typical peat bog, nor is it a greenfield site. The site of the Proposed Project has been subject to intensive and large scale commercial peat production including the provision of an extensive drainage system. Operations ceased over 20 years ago and the site has since been allowed to re-vegetate with the net result being that areas of it have become overgrown with woodland and scrub. The site and its environs therefore do not share the same visual characteristics as an intact peat bog.

The previous commercial peat extraction and the subsequent revegetation of the subject lands has resulted in the site being initially extensively drained and lowered within the local topography and subsequently (through the revegetation) completely screened from any external or longer distance views. This has resulted in the site not sharing any of the common visual characteristics of a peat bog. The site does, however, share the visual characteristics of a woodland. The compatibility table from the CDP notes that solar energy development has a compatibility rating of “2” in relation to forestry/woodlands.

The landscape section of this EIAR provides a detailed review of the character and potential impact of the Proposed Project and clarifies that the proposed solar array will not be visible from locations external to the site due to the presence of heavy screening provided by vegetation which is (and will remain) under the control of the Bord na Móna. The designations set out above relate to the potential visual compatibility of the land uses with the relevant LCA’s and landscape factors. The site

of the current proposal is unique in that it can accommodate the Proposed Project without impacting on any views to or from the site, and furthermore the site is in brownfield condition having been subject to large scale commercial peat harvesting. In relation to assessing the suitability of projects in various landscape settings the CDP acknowledges that the tables (discussed above) provide guidance, however:

“It should be noted that all developments are unique and at micro/local level landscapes vary in terms of their ability to absorb development and each site should be assessed on its individual merits.”

2.2.5.3 Commission for Regulation of Utilities (CRU)

The Commission for Regulation of Utilities (CRU) is responsible for determining connection policy for proposed electricity generators, including Solar Farms, who wish to connect to the electricity network in Ireland.

2.2.5.4 Renewable Energy Feed In Tariff/Renewable Energy Support Scheme

The current primary support mechanisms for renewable electricity are the REFIT (Renewable Energy Feed-in Tariff) schemes. The schemes were designed to provide certainty to renewable electricity generators by providing them with a minimum price for each unit of electricity exported to the grid over a 15-year period. It has been in operation for wind and hydro power since 2006. It operates on a sliding scale, acting to ensure a guaranteed price for each unit of electricity exported to the grid by paying the difference between the wholesale price for electricity and the REFIT price. This means that as electricity prices increase, the amount paid under REFIT falls, mitigating the effect on the consumer. The REFIT 1 scheme was set up in 2006 to support the construction of an initial target of at least 40MW of renewable energy powered electricity. The REFIT 2 scheme was opened in March 2012 for onshore wind, small hydro and landfill gas. The REFIT 3 scheme opened in February 2012 for biomass technologies. The Department of Communications, Climate Action and Environment (DCCA) have developed high level design of a new support scheme.

The RESS (Renewable Electricity Support Scheme) was approved by cabinet on the 25th of July 2018. The RESS high level design has been submitted to the EU for approval. It is expected that the 1st round of RESS auctions will commence in the 2nd quarter of 2019 and be held on a regular basis subsequent to that in 2020, 2021, 2023 and 2025. The Renewable Electricity Support Scheme will provide support to renewable electricity projects in Ireland. The RESS will deliver a range of policy objectives including:

- An Enabling Framework for Community Participation through the provision of pathways and supports for communities to participate in renewable energy projects
- Increasing Technology Diversity by broadening the renewable electricity technology mix (the diversity of technologies)
- Delivering an ambitious renewable electricity policy to 2030
- Increasing energy security, energy sustainability and ensuring the cost effectiveness of energy policy

2.2.6 Other Relevant Guidelines

2.2.6.1 Forest Service Guidelines

The Forest Service is responsible for ensuring the development of forestry within Ireland in a manner and to a scale that maximises its contribution to national socio-economic well-being on a sustainable basis that is compatible with the protection of

the environment. The forestry works (felling/planting) associated with the Proposed Project will be carried out under the relevant guidance from the Forestry Service.

2.3 Description of the Proposed Project Site

2.3.1 Site Location

The Proposed Project is located in northwest Co. Kildare, approximately 6.5km (kilometres) north of the village of Allenwood, 6 kilometres east of Carbury and 3km south of Johnstownbridge. The grid reference coordinates for the centre of the Proposed Project site are E 275,810, N 235,200. The Timahoe North site comprises the northern half of the Bord na Móna Timahoe bog unit, which forms part of the Allen bog group.

2.3.1.1 Site Access

The Proposed Project site is surrounded by private land on the north, east and west sides. To the south, the Proposed Project is bordered by the Derrymahon-Drehid L5025 local road and the Timahoe South bog. The Proposed Project site is accessed from the south via the L5025 local road, which adjoins the R402 Regional Road to the west of the Timahoe North site. The Derryiron-Maynooth 110 kV overhead line traverses the southern section of the Proposed Project site.

2.3.2 Land-Use

The Timahoe North site has been out of commercial peat production by Bord na Móna for over 20 years. Land-cover within the Proposed Project site comprises primarily a mix of bog woodland and revegetation of bare peat and birch scrub. The total Timahoe North site area measures approximately 807 hectares; within this site however, the Proposed Project will occupy a smaller footprint of approximately 238 hectares. The Proposed Project will be located within the interior of the site and will be essentially surrounded on all sides by existing mature vegetation and scrub which will be retained.

2.3.3 Physical Characteristics of Site and Surrounding Lands

The Proposed Project site is located within the Western Boglands LCA, which is described in the Landscape Character Assessment as follows:

“This lowland landscape character unit, located to the western central part of the County, is characterised by flat topography and smooth terrain. The terrain has a high water table and it is badly drained, providing generally unstable and unproductive land. This area of the county is highly distinctive due to the existing large areas of bogland vegetation. The commonly large sized open trees, and have the potential to partially screen adjacent lands. Nevertheless, the generally low vegetation and the even ground provide extensive longdistance visibility. The skyline to the south of this unit is defined by the Chair of Kildare Hills and the Northern Uplands define the skyline to the northeast.

Soils in the area are largely dominated by raised bog and reclaimed peat, with some areas of grey brown podzolics and complex mineral soils. The area is generally unclassified with some lands classified as suitable and other areas considered of poor suitability for tillage, pasture and being of moderate suitability for forestry.”

The main land cover in the Western Boglands LCA encompasses peatlands, pastureland with patches of tillage and non-irrigated arable lands, and small settlements with clusters of scattered rural houses. The Landscape Character Assessment also states “a complementary significant landuse in the area is represented by the large coniferous forests planted in cutaway bogs and the natural revegetation occurring in set-aside cutaway areas”.

The Western Boglands LCA is deemed to be of ‘High’ Landscape Sensitivity, as per Table 14.1 of the County Development Plan 2017 – 2023. High Landscape Sensitivity represents Class 3 on a scale of 1 to 5, where Class 1 is ‘Low’ Sensitivity and Class 5 is ‘Unique’. In setting out policies in relation to the Lowland Plains and Boglands Character Area however, the CDP includes the following:

Policy LL5: *It is the policy of the Council to recognise that cutaway and cut-over boglands represent degraded landscapes and/or brownfield sites and thus are potentially robust to absorb a variety of appropriate developments.*

2.4 Planning History

This Section of the EIA sets out the relevant planning history of the Proposed Project study area, planning applications in the vicinity of the Timahoe North site and other renewable energy applications within the wider area.

2.4.1 Applications in the Vicinity of the Proposed Project Site

There are a number of planning applications located within the vicinity of the development site. The majority of planning applications which have been made are in relation dwelling houses or agricultural developments. These include the following;

- **Pl. Ref. No. 04/33** - N Reilly & F Van Aesch applied to Kildare County Council for permission to erect a two storey dwelling, garage and Envirocare waste water treatment unit at Timahoe East, Donadea. The Planning Authority granted permission on the 19th May 2004, however an Taisce appealed the decision to An Bord Pleanala who overturned the local authority decision and refused planning permission on the 11th October 2004.
- **Pl. Ref. No. 10/1091** - Derek and Sarah Browne applied to Kildare County Council to construct a single storey three-bedroom dwelling, an effluent treatment system, percolation area and associated site works. The Planning Authority granted permission on the 25th of March 2011.
- **Pl. Ref. No. 10/119** - Mr. & Mrs John Kelly applied to Kildare County Council to construct Bungalow with roof space for future conversion, effluent treatment plant, detached garage. The Planning Authority refuse permission on the 2nd of June 2011.
- **Pl. Ref. No. 10/943** - Mr. & Mrs John Kelly applied to Kildare County Council to construct to retain and complete existing partially constructed extension to the front of the existing food production factory, this extension when completed will form part of the overall food production plant. Retention Permission was also sought to retain a rear service plant room and to enclose open storage area to the rear of the building. Full planning permission was also sought to revise the site boundaries. The Planning Authority granted permission on the 26nd of April 2011.

- **Pl. Ref. No. 11/382** - Eimear Phelan & John McCaul applied to Kildare County Council for the development which will consist of the construction of a timber frame bungalow, domestic garage, site entrance, wastewater treatment system, together with all associated ancillary site works. The Planning Authority granted permission on the 9th of June 2011.
- **Pl. Ref. No. 12/1018** - Paddy and Margaret Dunne applied to Kildare County Council for the development which consists of alterations to existing dormer bungalow previously granted under File Ref. 00/2025 which include: (a) erection of single storey extension to rear (southeast elevation); (b) erection of 2 No. dormer style windows to front (northwest elevation); (c) installation of 1 No. window to side (northeast elevation); (d) retention permission sought for existing garage/fuel store; and (e) all associated site-works. The Planning Authority refused permission on the 22nd of February 2013.
- **Pl. Ref. No. 13/193** - Andrew Dermody applied to Kildare County Council for the erection of a bungalow, garage / fuel store for domestic use and the installation of proprietary wastewater treatment plan with percolation area and all associated site works. The Planning Authority granted permission on the 1st of November 2012.
- **Pl. Ref. No. 13/193** - Marie Collins applied to Kildare County Council for Construction of replacement dwelling and new effluent treatment system and percolation area at Mucklon, Enfield. The Planning Authority granted permission on the 16th August 2013.
- **Pl. Ref. No. 13/749** - Christine Dowdall applied to Kildare County Council for storage shed / fuel store for domestic use. The Planning Authority granted permission on the 14th November 2013.
- **Pl. Ref. No. 14/675** - O'Brien Fine Foods applied to Kildare County Council for extension of existing food facility consisting of 5280sqm of ground floor extension to accommodate production area, storage areas and plant rooms, 4820sqm of first floor above proposed ground floor to accommodate administration offices, staff changing rooms, staff canteen, plant rooms and packaging storage, demolition of 3 number existing plant rooms totalling 163sqm to rear of site, 180sqm loading bay extension to existing north east elevation, 215sqm production extension to existing south west elevation, 72sqm effluent treatment building, 32sqm security hut, 116sqm machinery store located in rear service yard, associated site works including car parking, bicycle parking, landscaping and drainage works within the existing site and retention permission for temporary office building of 350sqm for a period of two years at Timahoe East, Donadea. The Planning Authority granted permission on the 16th January 2015.
- **Pl. Ref. No. 15/916** - Anthony Keegan applied to Kildare County Council for (a) The erection of a dormer type house, (b) Garage/fuel store for domestic use, (c) The installation of proprietary wastewater treatment plant with percolation area to serve the proposed house, the removal of the existing septic tank serving the adjoining house and the installation of a proprietary wastewater treatment plant with percolation area to serve the existing adjoining house and (d) Upgrading of the existing vehicular entrance to form a combined double entrance and all associated site works. The Planning Authority refuse permission on the 9th of December 2015.

- **Pl. Ref. No. 16/101** - O'Brien Fine Foods applied to Kildare County Council for permission for the construction of a waste water treatment system consisting of 7 metre high biological tank, 4.12 metre high Sludge Tank, 2 metre high Clarifier, 2 metre high DAF Unit, below ground Sump, 2 metre high weather enclosure for electrical equipment and an integrated constructed wetlands (ICW) consisting of 4 number ponds occupying an area of 5.5 hectares, perimeter embankments of 1.5 metres in height, discharge point to adjacent watercourse and associated site works at Timahoe East, Donadea. The Planning Authority granted permission on the 6th May 2016.
- **Pl. Ref. No. 16/173** - Nua Healthcare Services applied to Kildare County Council for 1. Alterations to existing dwelling originally permitted under Ref:04/2778. Alterations include changes to fenestration and doors, and internal changes. 2. Change of use of the house to a residence for persons with an intellectual or physical disability or mental illness and persons providing care for such persons. 3. Internal/external alterations to former garage from that permitted under Ref: 04/2778 and change of use of same to independent living unit for persons with an intellectual or physical disability or mental illness with the Nua Healthcare Service. 4. New garage as constructed. 5. New boundary fence and gate at Timahoe East, Donadea. The Planning Authority deemed this an incomplete application.
- **Pl. Ref. No. 16/532** - Anthony Keegan applied to Kildare County Council for (A) The erection of a storey and a half type house, (B) Garage/fuel store for domestic use, (C) The installation of proprietary wastewater treatment plant with percolation area to serve the proposed house and (D) The removal of the existing septic tank serving the adjoining house and the installation of a proprietary wastewater treatment plant with percolation area to serve the existing adjoining house and (E) Upgrading of the existing vehicular entrance to form a combined double entrance and all associated site works at Mulgeeth, Enfield, Co. Kildare. The Planning Authority granted permission on the 8th September 2016.
- **Ref. No. 17/9** - Rioghnach O'Kiely applied to Kildare County Council for ((a) Erection of dormer type house; (b) Garage/fuel store for domestic use; (c) The installation of septic tank with percolation area and (d) Upgrading of existing entrance to a combined double vehicular recessed entrance and all associated site works at Kilmurray, Enfield, Co. Kildare. The Planning Authority granted permission on the 10th of April 2017.

Other Solar Farms in Kildare

- **Pl. Ref. No. 15/1172-** Robert Wilson Wright applied to Kildare County Council for a solar PV panel array consisting of up to 66,000m² of solar panels on ground mounted steel frames, 2 no. electricity control cabins, 10 no. inverter units, underground cable ducts, hardstanding area, boundary security fence site entrance, CCTV and all associated site works located in the townland of Coolcarrigan, Timahoe West,,Co. Kildare. The Planning Authority granted permission on the 15th of June 2016.
- **Pl. Ref. No. 16/1265-** Power Capital Renewable Energy Limited applied to Kildare County Council for 10 year permission for the construction of an up to 25 MW solar PV farm comprising approximately 86,200 no. photovoltaic panels

on ground mounted frames within a site area of 35.6 hectares and associated ancillary development including 20 no. transformer stations, 20 no. auxiliary transformer stations, 20 no. inverters, 1 no. client side substation, 1 no. single storey storage building, 1 no. single storey communications building, 1 no. single storey DNO building, 6 no. CCTV security cameras mounted on 4 metre high poles and perimeter security fencing (2 metres high) and localized improvements to an existing agricultural access from the adjoining L1004 road to the south, on lands in the townland of Dysart, Johnstownbridge, Co. Kildare. The Planning Authority granted permission on the 21st of April 2017.

- **Pl. Ref. No. 16/1265-** Power Capital Renewable Energy Limited applied to Kildare County Council for a 10 year permission for development on lands which will consist of an extension to the solar PV farm granted permission under Register Reference 16/1265 comprising the construction of approximately 25,300 No. photovoltaic panels on ground mounted frames within a site area of 11.50 hectares and associated ancillary development including 4 No. transformer stations, 4 No. auxiliary transformer stations, 4 No. inverters, 1 No. CCTV security camera mounted on 4 metre high pole, perimeter security fencing (2 metres high) and internal access tracks. The Planning Authority granted permission on the 6th of February 2018.

Other Significant Developments

- **Pl. Ref. No. 04/371-** Bord na Mona applied to Kildare County Council for the development of a landfill site and composting facility with lifespan of 20 years. This permission was upheld by An Bord Pleanála under reference no. PL. 09.212059. The maximum permitted quantities under the foregoing permission comprise 120,000 tonnes of bio-waste per annum at the composting facility. This application was accompanied by an EIS and the application was subject to an oral hearing by An Bord Pleanála. The Planning Authority granted permission on the 13th of April 2005 with An Bord Pleanála granting permission on the 21st of November 2005.
- **Pl. Ref. No. 10/1172-** Bord na Mona applied to Kildare County Council for extension of duration for construction of Dredge Waste Management Facility consisting of an engineered landfill site for an operational lifespan of 20 years. The Planning Authority granted permission on the 25th of February 2011. This permission has been constructed.
- **Pl. Ref. No. 11/537 -** Bord na Mona applied to Kildare County Council for a development of a landfill gas utilisation plant which will be phased and will generate up to 4.99MW of electricity for input into the national grid. The proposed development will consist of: i) Four separate purpose built and environmentally controlled containers (each circa 2.5 x 12.2m x 2.6m high) enclosing a landfill gas engine generating approximately 1.4MW of power each, with one combined 12.0m high stack; ii) Four separate purpose built and environmentally controlled containers (each 3.0m x 3.0m x 3.0m high) enclosing a transformer; iii) ESB Substation (ca. 6.0m x 9.7m x 4.5m high); iv) 2 no. bunded oil tanks (each 5m³ capacity); and v) Ancillary concrete foundation slabs; earthworks and site grading; palisade fencing (2.4m high ca. 220m long); double gates; ducting and services; above ground piping and all associated works. The proposed development relates to an activity covered by Waste Licence No. W0201-03 issued by the Environmental Protection Agency. The proposed development will not require a review of the Waste Licence. The

Planning Authority granted permission on the 14th of June 2011. This development has been constructed.

- **Pl. Ref. No. 11/902** - Bord na Mona applied to Kildare County Council for an extension (with a gross floor space of approximately 383 square meters) to the previously permitted composting facility. The proposed extension comprises the construction of a steel portal frame structure, the construction of reinforced concrete walls and the erection of cladding to match the existing composting facility. The ridge height of the proposed extension is approximately 10.26m above its finished floor level. Ancillary works required to integrate the proposed extension into the existing composting facility will include the construction of an external hard standing area, the construction of surface water drainage and wastewater drainage within an overall application area of 0.183 hectares. No increase to the previously permitted waste acceptance of 25,000 tonnes per annum at the composting facility is proposed, rather, an extension, an extension to provide additional floor space. The proposed development relates to an activity covered by existing Waste Licence No. W0201-03 issued by the Environmental Protection Agency. The proposed development will not require a review of the existing Waste Licence. The Planning Authority granted permission on the 2nd of November 2011.
- **An Bord Pleanála Ref. 300506-17**- Bord na Mona applied to An Bord Pleanála for further developments to the existing Drehid Waste Management Facility in its landholding located within the townlands of Timahoe West, Coolcarrigan, Killinagh Upper, Killinagh Lower, Drummond, Kilkeaskin, Loughnacush, and Parsonstown, Carbury, County Kildare. The proposed development will include the following:
 - Changes to the volume and nature of wastes to be accepted at the landfill disposal facility;
 - Development of additional non-hazardous and hazardous landfill capacity to provide for the sustainable landfill of these waste streams for a period of twenty-five years;
 - Pre-treatment or processing of certain waste streams prior to landfill;
 - Increasing the volume of waste to be accepted at the composting facility, and the removal of the restriction on the operating life of the composting facility contained in Condition 2(2) of ABP Ref No. PL.09.212059;
 - On-site treatment of leachate; and,
 - Development of associated buildings, plant, infrastructure and landscaping.

This application is ongoing.

2.5 Scoping and Consultation

2.5.1 Scoping

Scoping is the process of determining the content, depth and extent of topics to be covered in the environmental information to be submitted to a competent authority for projects that are subject to an Environmental Impact Assessment (EIA). This process is conducted by contacting the relevant authorities and Non-Governmental Organisations (NGOs) with interest in the specific aspects of the environment with the potential to be affected by the proposal. These organisations are invited to submit comments on the scope of the EIAR and the specific standards of information they

require. Comprehensive and timely scoping helps ensure that the EIA refers to all relevant aspects of the Proposed Project and its potential effects on the environment; and provides initial feedback in the early stages of the Proposed Project, when alterations may still easily be incorporated into the design. In this way scoping not only informs the content and scope of the EIA, it also provides a feedback mechanism for the proposed design itself.

A scoping report, providing details of the application site and the Proposed Project, was prepared by McCarthy Keville O’Sullivan Ltd. and circulated to those bodies listed in Table 2.3 in May 2018. McCarthy Keville O’Sullivan Ltd. requested the comments of the relevant personnel/bodies in their respective capacities as consultees with regards to the EIA process.

2.5.2 Scoping Responses

Table 2.3 presents a summary of all scoping responses received. Copies of the scoping responses are included in Appendix 2-1 of this EIA. The recommendations of the consultees have informed the EIA preparation process and the contents of the EIA, as described in Table 2.4.

Table 2.3 Scoping Responses

No.	Consultee	Response
1	An Taisce	No response to date
2	Bat Conservation Ireland	No response to date
3	BirdWatch Ireland	Confirmed receipt of scoping document
4	Commission for Regulation of Utilities	No response to date
5	Department of Agriculture, Food and the Marine	Response received 21 st June 2018
6	Department of Communications, Climate Action and the Environment	No response to date
7	Department of Culture, Heritage and the Gaeltacht	Response received 18 th July 2018
8	Department of Defence	Response received 2 nd July 2018
9	EirGrid	No response to date
10	Environmental Protection Agency	Response received 18 th July 2018
11	ESB Networks	No response to date
12	Fáilte Ireland	No response to date
13	Geological Survey of Ireland	No response to date
14	Health Service Executive	No response to date
15	Inland Fisheries Ireland	Response received 18 th May 2018
16	Irish Aviation Authority	Response received 14 th May 2018
17	Irish Peatland Conservation Council	Response received 21 st May 2018
18	Irish Water	No response to date
19	Irish Wildlife Trust	No response to date
20	Kildare County Council – Planning Department	No response to date
21	Kildare County Council – Environment Department	No response to date

No.	Consultee	Response
22	Kildare County Council – Roads Department	No response to date
23	Kildare County Council – Heritage Officer	No response to date
24	Office of Public Works	No response to date
25	South Eastern River Basin District	No response to date
26	Sustainable Energy Authority of Ireland	No response to date
27	The Heritage Council	No response to date
28	Transport Infrastructure Ireland	Response received 17 th May 2018

Table 2.4 presents a summary of the key points from the scoping responses, and notes where they have been addressed in this EIAR. The responses received were fully considered and issues raised were followed up through contact with the respondent where clarification was necessary and addressed throughout the EIAR.

Table 2.4 Review of Scoping Responses

No.	Consultee	Key Scoping Response Points	Addressed in EIA
1	BirdWatch Ireland	Acknowledgement receipt	N/A
2	Department of Agriculture, Food and the Marine	Response received 21 st June 2018 The Department of Agriculture, Food and the Marine confirmed they have no observations or comments to make.	N/A
3	Department of Culture, Heritage and the Gaeltacht	Acknowledgement receipt received 14 th May 2018 and follow up email and final response received 18 th July 2018. The Department of Culture, Heritage and the Gaeltacht confirmed they have no comments at this stage of the application.	N/A
4	Department of Defence	Response received 2 nd July 2018 The Department of Defence provided observations from the Air Corps regarding the Proposed Project site. They advised that an Aviation Impact Assessment for the Proposed Project should be completed to include glint and glare observations.	Section 5.7 - Population and Human Health – Glint and Glare This section will refer to the potential impact of glint and glare in regard to residential amenity and human health. Appendix 5.3 – Glint and Glare Assessment to include Aviation Impact Assessment in line with request from Department of Defence and the Irish Aviation Authority. Chapter 13, Section 13.2 – Material Assets – Glint and Glare This section will refer to the potential impact of glint and glare on aviation.
5	Environmental Protection Agency	Response received 18 th July 2018 EPA response included a consultation request which they made to the Planning Authority, Kildare County	

No.	Consultee	Key Scoping Response Points	Addressed in EIA
		<p>Council and the Health Services Executive. No response was received.</p> <p>Their comments include: <i>Having regard to the specific characteristics of the project, including location and technical capacity, and likely impact on the environment, the Agency is of the opinion that the scope and level of detail to be included in the environmental impact assessment report should as a minimum:</i></p> <ul style="list-style-type: none"> <i>(i) identify, describe and assess in an appropriate manner, in light of each individual case, the direct and indirect significant effects of a project on each of the factors listed in Article 3 of the Directive 2014/52/EU;</i> <i>(ii) have regard to the requirements of the draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, as appropriate;</i> <i>(iii) have regard to the relevant topics contained in the EPA's Advice Notes on Current Practice (in the preparation of Environmental Impact Statements) September 2003;</i> <i>(iv) satisfy the requirements of Directive 2014/52/EU.</i> 	<p>Section 1.1 – All guidance used within the EIA will be referenced within this section.</p> <p>Sections 5-13 will take into account comments from the EPA and complete their assessment in respect to the referenced guidance.</p>
6	Inland Fisheries Ireland	<p>Response received 18th May 2018</p> <p>Inland Fisheries Irelands (IFI) response included reference to:</p>	

No.	Consultee	Key Scoping Response Points	Addressed in EIAR
		<ul style="list-style-type: none"> • The EU Water Framework Directive (2000/60/EC) and the requirement for <i>protection of the ecological status of river catchments – this encompasses water quality and requires the conservation of habitats for ecological communities.</i> • Article 5 of the 2009 Surface Water Regulations, where <i>a public authority, in performance of its functions, shall not undertake those functions in a manner that knowingly causes or allows deterioration in the chemical or ecological status of a body of surface water.</i> • Article 28 (2) of the 2009 Surface Water Regulations <i>states that a surface water body whose status is determined to be less than good shall be restored to at least good status not later than the end of 2015 and any water body of good status should remain at least this status.</i> <p>In relation to the Proposed Project site; IFI refer to the Enfield Blackwater River catchment at Timahoe North, which is currently at good status and should remain so. The Enfield Blackwater contains stocks of Atlantic salmon, Brown Trout and Lamprey. It contains prime salmonid nursery beds.</p> <p>They further voice their concern with regard to the construction phase of this project, especially with regard to in-stream works.</p>	<p>Section 6.4 – Biodiversity, Flora and Fauna This section will refer to the guidance used throughout their assessment in order to assess the ecological impact of the Proposed Project site.</p> <p>Section 8.1– Hydrology and Hydrogeology This section will refer to the guidance used throughout their assessment in order to assess the ecological impact of the Proposed Project site.</p> <p>Section 6.4 – Biodiversity, Flora and Fauna This section will refer to the construction period and any potential impact it will have on the fisheries and aquatic fauna.</p>

No.	Consultee	Key Scoping Response Points	Addressed in EIA
		<p>Recommendation: To carry out all in-stream works as per <i>Guidelines on Protection of Fisheries During Construction Works and Adjacent to Waters (IFI, 2016)</i>. They further note that the timing to carry out any instream works are the months July to September in order to facilitate lamprey populations. IFIs preference would be for overhead cabling as this would have the least effect on fisheries interests.</p>	<p>Section 8.4.2 – Hydrology and Hydrogeology This section will refer to the construction period and any potential impact it will have on the hydrological quality. This section will also note construction hours in line with IFI guidance.</p>
7	Irish Aviation Authority	<p>Response received 14th May 2018</p> <p>Irish Aviation Authority (IAA) observed that the Proposed Project site should be assessed for any potential glare and glint issue in relation to aviation due to its proximity to:</p> <ul style="list-style-type: none"> • Casement Aerodrome; • Weston Aerodrome; • Clonbullogue Aerodrome and; • Moyglare Aerodrome. <p>The IAA provide guidance relating to the USA Federal Aviation Administration (FAA) and their guidance and to evaluate the potential effect of solar PV systems on aviation. They attached details in a separate document.</p> <p>Furthermore, the IAA commented that contact should be made with any airport within 30km of the Proposed Project site, for their input to carry out this analysis regarding flight paths.</p> <p>If the Proposed Project site is within 30km of an aerodrome, a specialised consultant may be required to carry out specific analysis.</p>	<p>Section 5.7 - Population and Human Health – Glint and Glare This section will refer to the potential impact of glint and glare in regard to residential amenity and human health.</p> <p>Appendix 5.3 – Glint and Glare Assessment to include Aviation Impact Assessment in line with request from Department of Defence and the Irish Aviation Authority.</p> <p>Section 13.2.4 – Material Assets – Glint and Glare This section will refer to the potential impact of glint and glare on aviation.</p>

No.	Consultee	Key Scoping Response Points	Addressed in EIAR
		<p>If the Proposed Project site is within 10km of an aerodrome, a specialised consultant should be used to carry out specific analysis.</p>	
8	Irish Peatland Conservation Council	<p>Response received 21st May 2018</p> <p>Irish Peatland Conservation Council (IPCC) responded advising on their work and legal obligations to protect peatlands specific to Co. Kildare.</p> <p>Advises the developer to be aware of the Environmental Protection Agency funded project BOGLAND when developing in or within close proximity to peatland habitat.</p> <p>Comments specifically in-relation to the Proposed Project Site</p> <p><i>“IPCC have analysed all of the data we hold in relation to Timahoe. It is clear from the account below that the site sits in a rich archaeological complex which may indicate that the bog may have been used as a burial site or occupation site by people over the millennia. This needs archaeological investigation and monitoring during construction. In addition, Timahoe bog contributes to river water quality in the region. The developer needs to be aware of the sensitivity and poor water quality rating in local rivers and through a hydrology management plan, water quality leaving the site needs to be continuously monitored and improved. In addition, the connection between the hydrology of Timahoe and sites further afield needs to be established. Furthermore, set against the catastrophic loss of raised bog habitat in</i></p>	<p>Section 6.4 – Biodiversity, Flora and Fauna This section will refer to the potential impact of the Proposed Project site on designated sites and species to include any identified relevant fauna and invasive species.</p> <p>Section 8.4 – Hydrology and Hydrogeology This section will refer to the potential impact of the Proposed Project site on water quality and wetlands in the vicinity and surrounding area.</p> <p>Appendix 8-2 – Flood Risk Assessment This will highlight any potential risks from flooding and risks on water quality in the area.</p> <p>Section 12.4– Cultural Heritage This section will refer to the potential impact of the Proposed Project site on National Monuments in the vicinity and surrounding area.</p>

No.	Consultee	Key Scoping Response Points	Addressed in EIAR
		<p><i>Kildare, the developer needs to research and develop a management plan for the various habitats occurring within the site and on its perimeter, particularly raised bogs, open water habitats and bog woodlands. Species of conservation concern within this area include Curlew and Common Frog and an action plan for these needs to be included with the development proposal. Should there be amenity proposals to accompany this development IPCC would request that all of these elements are included in the interpretation for the public.”</i></p> <p>More specifically, they refer to potential issues arising in regard to:</p> <ol style="list-style-type: none"> 1. Designated Sites: <ul style="list-style-type: none"> • Ballynafagh Lake SAC; • Ballynafagh Bog SAC; • The Long Derries, Edenderry pNHA; • Donadea Wood; • Carbury Bog NHA and; • Hodgestown Bog NHA. 2. Curlew; 3. Water Quality; 4. IPCC Frog Database; 5. National Monuments; 6. Wetlands and; 7. Invasive Species. 	
9	Transport Infrastructure Ireland	<p>Response received 17th May 2018</p> <p>Transport Infrastructure Ireland (TII) responded and recommended general guidance for the preparation of an EIAR. This list is by no means complete and further</p>	<p>Section 13.1 – Material Assets: Traffic and Transportation</p> <p>This section will refer to the potential impact of traffic from the Proposed Project site on the surrounding road network. If necessary, it will propose management and</p>

No.	Consultee	Key Scoping Response Points	Addressed in EIAR
		<p>issues should be addressed in accordance with best practise.</p> <p>Points to note:</p> <ul style="list-style-type: none"> ▪ Consultations should be had with relevant local authority, road departments, etc. ▪ Concerns regarding the potential impact of the Proposed Project on the national road network ▪ Visual impacts from existing national roads ▪ Include all conditions and/or modifications imposed by An Bord Pleanála regarding road schemes ▪ The developer should have regard to TII guidance and publications to determine further assessments, audits, etc. ▪ The EIAR should consider Environmental Noise Regulations 2006 and mitigation regarding noise. ▪ Completion of a Traffic and Transport Assessment. ▪ The EIAR should identify any methods or techniques proposed for any works traversing or in proximity to the national road network. ▪ Proposed cabling and potential connection routing, the development should note proposed protection to national road schemes. Cable routing should suggest alternatives and should avoid impact with all TII infrastructure. Separate approvals may be required for works traversing the road or motorway network. ▪ Haul route should be clearly identified and fully assessed in regard to the surrounding road network. 	<p>mitigation measures to reduce impact on the surrounding road network.</p>

2.5.3 Pre-Planning Meetings

2.5.3.1 Kildare County Council

An initial pre-planning meeting was held with the Planning Department of Kildare County Council in relation to the Proposed Project on the 11th of October 2017 which was attended by representatives of the Planning Department, Bord Na Móna Powergen Ltd., McCarthy Keville O’Sullivan Ltd. and ESB Wind Development Ltd.

Items discussed at the meetings included traffic queries, landscape, hydrology, plans in relation to the overall decommissioning of the development, potential impacts to heritage, environmental queries and SID discussions. This initial pre-planning meeting was held with the Local Authority in advance of undertaking the S182A discussions with An Bord Pleanála.

A further pre-planning meeting was held with the Planning Department of Kildare County Council in relation to the Proposed Project prior to the submission of the current planning application on this site. The meeting was held on 3rd of July 2018, which was attended by representatives of the Planning Department, Bord Na Móna Powergen Ltd. McCarthy Keville O’Sullivan Ltd. and ESB Wind Development Ltd.

Items discussed at the meetings included an overview of the proposal, the planning history of the Proposed Project site, proposed layout and the design process, county development plan policy and the outcome of the An Bord Pleanála S182A process. Drawing scales and overall approach to the application process were also discussed as were the proposed amenity provisions.

2.5.3.2 An Bord Pleanála

Consultations were held with the Board under the provisions of Section 182E of the Planning and Development Act 2000, as amended. A pre-planning meeting was held with the Board as part of this process. The meeting was held on the 5th of March 2018 which was attended by representatives of An Bord Pleanála, Bord Na Móna Powergen Ltd., McCarthy Keville O’Sullivan Ltd. and ESB Wind Development Ltd.

Items discussed at the meetings included a detailed description of the selected site including site location map and a comprehensive review of the nature of the Proposed Project. The field work that had been carried out was also discussed as was the EIAR screening, public consultations, grid connection and review of S182A process.

The pre-application consultation process was concluded by the Board in its letter dated 6th June 2018 (copy attached as Appendix 2-3). In its correspondence the Board has acknowledged that a portion of the Proposed Project, namely the 110kV works (including the substation and overhead line infrastructure) required to connect the Proposed Project (Solar Farm) to the national electricity grid falls within the scope of S182A of the Planning and Development Act, 2000 (as amended), and that an application for permission for that portion of the proposed project must therefore be made directly to the Board as deemed Strategic Infrastructure. The Board’s direction clarifies as follows in this regard:

“The Board decided that the proposed development does comprise Strategic Infrastructure Development, generally in accordance with the inspector’s recommendation.

Note: The Board also agreed with the inspector's conclusion in Section 8.2 of her report, meaning a planning application for the Solar Farm and battery storage should be made to Kildare County Council in the first instance

2.5.4 Community Consultation

2.5.5 Site Investigation Works

In June 2017, the Community Liaison Officer on behalf of the Proposed Project visited all homes within 1 kilometre of the boundary of the Proposed Project (approximately 120 homes). The purpose of this visit was to inform residents that Bord na Móna Powergen Ltd. and ESB Wind Development Ltd. proposed to develop a Solar Farm; and as part of the Proposed Project site selection process the companies would be carrying out site investigation site work on Timahoe North bog. The purpose of this work being to determine the suitability of ground conditions for the construction of a Solar Farm.

2.5.6 Public Information Event

Public information sessions were held on the 8th of November 2017 in Carbury GAA Club and the 9th of November 2017 in Johnstownbridge GAA Club. The purpose of this information event was to inform the community of the Proposed Project, to present the proposed site layout and to invite feedback from the local community. In advance of the event, the Community Liaison revisited all homes within 1 kilometre of the proposed development to invite them to attend the information sessions (Appendix 2-2). The sessions were also advertised by a quarter page advert in the following newspapers:

- Kildare Post on the 26th October and 6th November 2017
- Leinster Leader 23rd and 30th October 2017
- Offaly Topic 6th November 2017
- Meath Topic 6th November 2017

The public information event was attended by representatives of ESB Wind Development Ltd, Bord na Móna and McCarthy Keville O'Sullivan Ltd. A number of information panels were on display at the event along with a project information leaflet and A3 doubled sided map (Appendix 2-2) of the Proposed Project for members of the community to bring home with them. Feedback was also invited from all who attended the event via a 'comment box'. The public information event was open from 3pm to 9pm and attended by approximately 50 people.

The feedback gained from the Timahoe North public information event has been beneficial with an emphasis on potential employment opportunities and recreational benefits.

The main issues and queries that arose during the event, and were discussed with attendees by the Proposed Project representatives, included project location, access to the national grid, design and layout, haul routes along local roads, potential impacts due to visuals, community benefits including amenity access and the timelines involved in the planning process.

Following the public consultations, the Community Liaison Officer visited residents within 1 kilometre of the Proposed Project to provide them with the map and information leaflet that was available at the public consultations. As part of the Public Information Event a dedicated email address was also created for the Proposed Project to facilitate queries from the public in relation to the proposed development. The relevant information leaflets and documentation used during the public engagement are attached in Appendix 2-2.

2.6 Cumulative Impact Assessment

The EIA Directive and associated guidance documents state that as well as considering any indirect, secondary, transboundary, short-, medium-, and long-term, permanent and temporary, positive and negative effects of the Proposed Project (all of which are considered in the various chapters of this EIAR), the description of likely significant effects should include an assessment of cumulative impacts that may arise. The factors to be considered in relation to cumulative effects include population and human health, biodiversity, land, soil, water, air, climate, material assets, landscape, and cultural heritage as well as the interactions between these factors. To gather a comprehensive view of cumulative impacts on these environmental considerations and to inform the EIA process being undertaken by the consenting authority, each relevant chapter within the EIAR considers any potential cumulative impacts where appropriate or relevant.

2.6.1 Methodology for the Cumulative Assessment of Projects

The potential cumulative impact of the Proposed Project as a whole combined with the potential impacts of other plans or projects has been carried out with the purpose of identifying what influence the Proposed Project will have on the surrounding environment when considered collectively with plans and permitted and constructed projects in the vicinity of the proposed site location.

Assessment material for the Cumulative Impact Assessments carried out within this EIAR was compiled in relation to the relevant projects within the vicinity of the Proposed Project from which there may be potential for cumulative impacts to arise. The material gathered comprised EIARs, planning application details and planning drawings and served to identify past and future projects, their activities and their environmental impacts.

2.6.2 Projects Considered in Cumulative Assessment

The projects considered in relation to the potential for cumulative impacts and for which all relevant data was reviewed include those listed in Section 2.4.1 and in particular those listed below.

Peat Extraction

Although Bord na Móna has ceased industrial peat extraction on site, there is currently some 'turf on the spread' peat extraction activity taking place within the northeast and south-southeast of the Timahoe North site. Only a portion of this area under lease is actively being cut.

Drehid Waste Management Facility

A planning application for the extension of the currently operational Drehid Waste Management Facility was made to An Bord Pleanála in December 2017 as 'Strategic Infrastructure Development' under the provisions of Section 37 of the Planning and Development (Strategic Infrastructure) Act, 2006. The total extension site covers an area of 272 hectares.

Solar Development

There are several other Solar Farm applications within 5km from the Proposed Project site. These include current planning applications for Ovidstown Solar Farm and Hortland Solar Farm, as well as planning permission for an extension of the granted Power Capital Renewable Energy solar development at Dysart, north east of the Proposed Project site and the granted Coolcarrigan site located in Timahoe West.

Drehid Wind Farm

Cognisance has also been had of a potential wind farm development, Drehid Wind Farm, which at the time of preparation of this EIAR has undergone a public consultation process and is proposed to the west of the Proposed Project site. At time of writing this project has not been consented.

Other Developments

The review of the Kildare County Council planning register documented relevant general development planning applications in the vicinity of the Proposed Project site; most of which relate to the provision and/or alteration of one-off rural housing and agriculture-related structures, as described in Section 2.4.1 above. These applications have also been taken account of in describing the baseline environment and in the relevant assessments.

Irish Water is continuing to progress the preparation of a planning application for the Water Supply Project Eastern and Midlands Region that is scheduled to be submitted to An Bord Pleanála in 2019. The identified route for the abstraction of water from the Parteen Basin in the Lower Shannon to Peamont reservoir passes to the south of the Timahoe North project site and does not traverse the proposed works area. Although the Irish Water proposal is at an early stage and is not consented cognisance has been taken of the preferred route.