

Proposed Lemanaghan Wind Farm



Introduction

Bord na Móna is an iconic commercial semi-state company that was established almost 90 years ago to develop Ireland’s peat resources for the economic benefit of Ireland and to enhance security of energy supply. In recent times, the business has gone through radical change, announcing the new “Brown to Green” strategy, moving away from peat, and focusing on renewable energy, recycling, and peatland rehabilitation operations. A key objective of this strategy involves using the land to continue to underpin Ireland’s energy independence by developing green, sustainable energy sources to assist with Ireland’s commitment to achieve 70% renewable electricity by 2030.

Bord na Móna is committed to investing to deliver low carbon energy solutions in Ireland, thereby continuing its pivotal role in contributing to the State’s energy security. To achieve this Bord na Móna will significantly increase its existing renewable energy asset base beyond the current installed capacity of almost 400 MW.

The company has been a leader in the Irish renewables sector for some time, having been involved in the development of Ireland’s first ever commercial wind farm on its Bellacorick Bog in Co Mayo in 1992.

As part of the company’s Brown to Green Strategy, Bord na Móna has identified Lemanaghan Bog as having the potential for the development of a wind farm.

The Proposed Development - Lemanaghan Wind Farm

The Development Study Area (as shown in Figure 1 below) for the proposed wind farm is Lemanaghan Bog, located in north west Offaly. Lemanaghan bog is adjacent to the communities of Ballycumber, Ferbane and Pollagh.

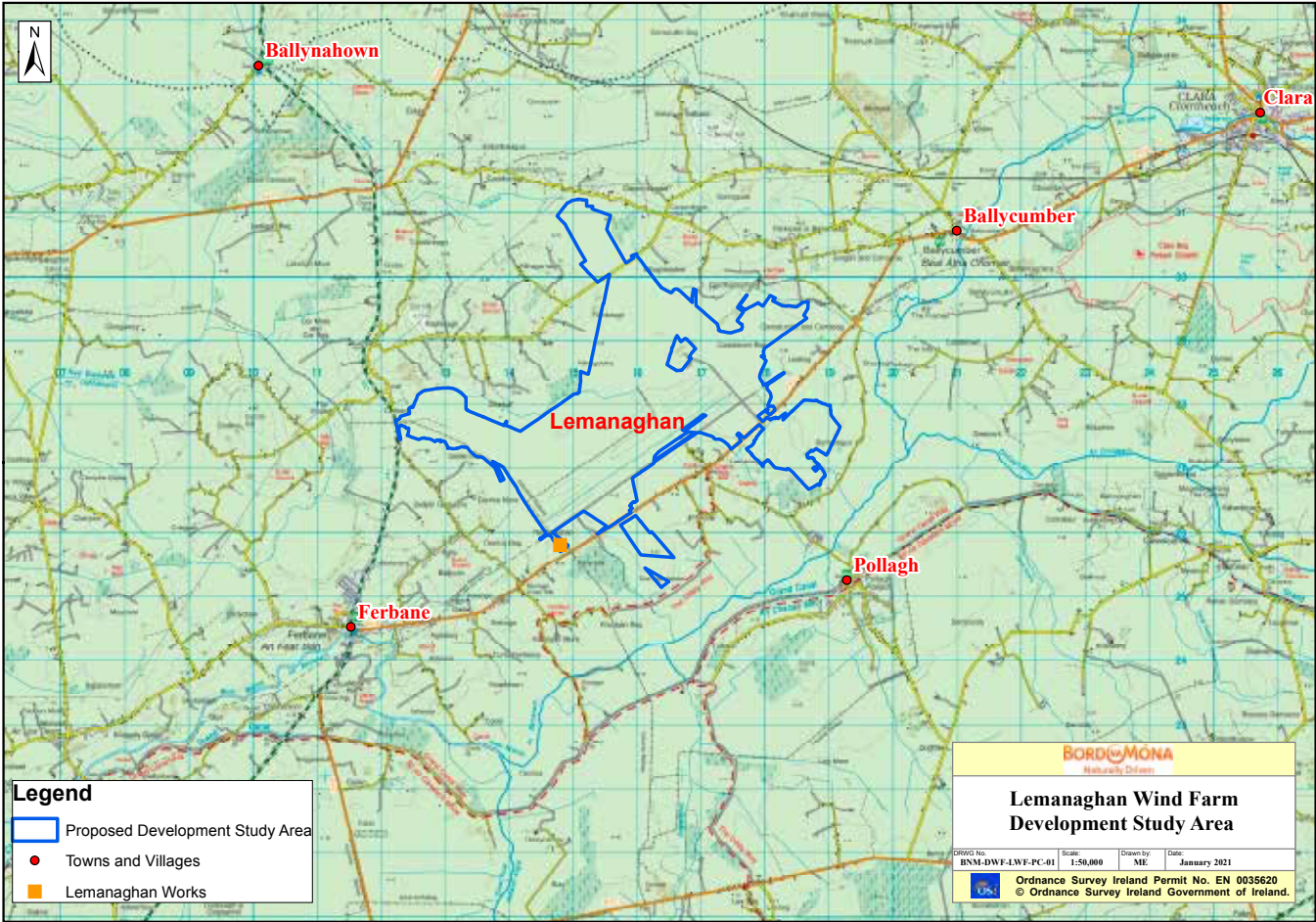


Figure 1: Study Area for proposed Lemanaghan Wind Farm

The development of a wind farm on this Bog would continue the long tradition of energy production in a new increasingly sustainable form and underpin Bord na Móna’s move away from its traditional ‘brown’ generation to a more sustainable ‘green’ future. The electricity generated by the turbines would be transmitted directly onto Ireland’s National Grid which is managed by EirGrid for distribution around the country. As the project is at an early stage the number and location of turbines has not yet been determined.

- Bord na Móna’s peatlands offer a number of advantages for the development of onshore wind farms, which include:
- Significant scale, and are present in large blocks
 - Industrial, brown-field sites, suitable for redevelopment
 - Open, unenclosed landscapes with good wind characteristics
 - Linked by rail or road passageways, suitable for cable connection
 - Generally flat and well drained, with minimal dangers of land slippage
 - Proven delivery of this type of development, as demonstrated by Bruckana, Mountlucas and Oweninny Wind Farms.

Irish Government Policy on Renewable Energy

Successive Governments have been developing policy to chart a course towards ambitious decarbonisation targets for Electricity, Transport, Built Environment, Industry and Agriculture.

In March 2019, the Joint Oireachtas Committee on Climate Action published its cross-party report entitled, Climate Change: A Cross-Party Consensus for Action, which set out 42 priority recommendations in the area of climate action, including a target for 70 percent renewable electricity.

The Programme for Government 2020 details how energy will play a central role in the creation of a strong and sustainable economy over the next decade. The reliable supply of safe, secure and clean energy is essential in order to deliver a phase-out of fossil fuels. We need to facilitate the increased electrification of heat and transport. This will create rapid growth in demand for electricity which must be planned and delivered in a cost-effective way.

The Irish Government supports the use of Ireland’s wind resources to meet our renewable energy targets. Outlined below is some of the most recent relevant Irish Government Policy:

- Energy White Paper entitled Ireland’s Transition to a Low Carbon Energy Future 2015-2030.
- Climate Action and Low Carbon Development Act 2015 as a landmark national milestone in the evolution of climate change policy in Ireland. The purpose of the act is pursuing the transition to a low carbon, climate resilient and environmentally sustainable economy.
- The Climate Action Plan 2019: This plan identifies how Ireland will achieve its 2030 targets for carbon emissions, and puts the country on a trajectory to achieve net zero carbon emissions by 2050. The plan outlines that Ireland will move to 70% renewable electricity by 2030. The Government will be bringing forward the Climate Action (Amendment) Bill, this will ensure the Climate Action Plan is made into law.
- Project 2040: National Development Plan 2018 – 2027 which outlines an additional 4,500 MW of renewable energy as an investment priority as part of strategic pillar No. 8 – Transition to a Low Carbon and Climate Resilient Society.
- Renewable Electricity Support Scheme to contribute to Ireland’s 2020 renewable electricity targets and to deliver Ireland’s renewable energy ambitions out to 2030.
- Department of Housing, Planning and Local Government is currently preparing an update to the 2006 Wind Energy Development Guidelines and in December 2019 published revised draft Wind Energy Development Guidelines for consultation.
- Department of Communication, Climate Action and Environment is preparing a Renewable Electricity Policy and Development Framework to guide the development of renewable electricity projects in line with the objectives of Irish energy policy.

Need for Wind Energy

Wind farms produce renewable electricity and assist in the offset of carbon emissions including those arising from other sectors, such as agriculture. The proposed project will contribute to both Ireland’s and the European Union’s renewable energy targets. It will also contribute to increasing the security of Ireland’s energy supply and will facilitate a higher level of energy generation and self-sufficiency.

In March 2019, the Government announced a renewable electricity target of 70% by 2030. It is acknowledged that wind energy will provide the main component of Ireland’s renewable electricity at that time The proposed development is likely to be operational before 2030 and would therefore contribute to this 2030 target.

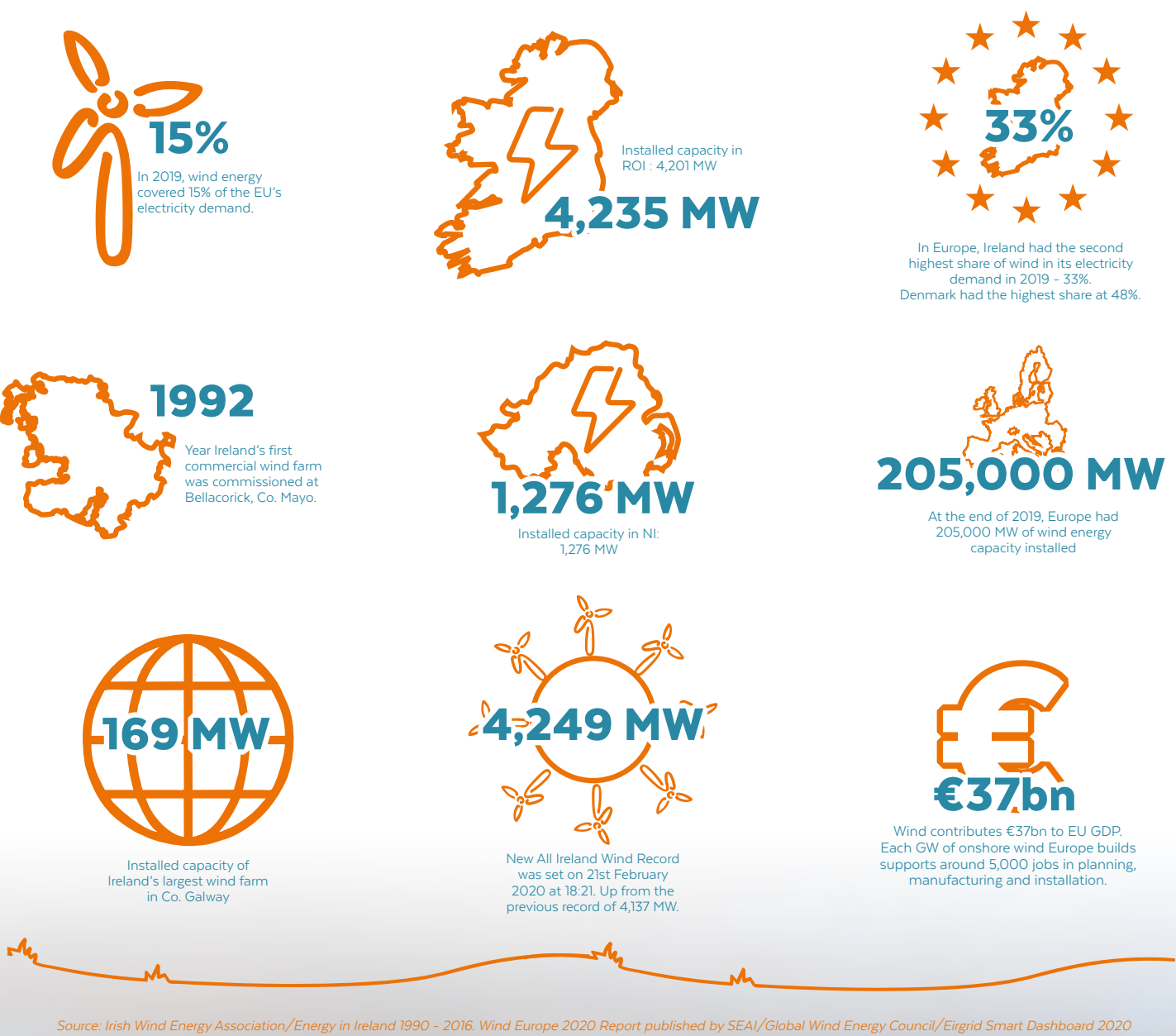
The Climate Action Plan 2019 (CAP) was published on the 1st of August 2019 by the Department of Communications, Climate Action and Environment. The CAP sets out an ambitious course of action over the coming years to address the impacts which climate may have on Ireland’s environment, society, economic and natural resources. This Plan clearly recognises that Ireland must significantly step up its commitments to tackle climate disruption. The CAP identifies a need for 8.2GW of onshore wind generation. The CAP presents clear and unequivocal support for the provision of additional renewable energy generation and presents yet further policy support for increased wind energy.

Site Selection

In selecting a site for a wind farm development there are a number of criteria that must be considered. Based on these criteria some sites are more suitable for wind farms than others. The main criteria that we consider include:

- Grid Access
- Proximity to Dwellings
- County Development Plan
- Environmental and Ecological Sensitivities
- Telecommunications Links
- Cumulative Visual Impact
- Flooding Risk
- Supporting Infrastructure
- Aviation

Wind Stats - Did you know?



How Wind Turbines Operate

Almost all wind turbines producing electricity consist of vertical blades which rotate around a horizontal axis. Most modern wind turbines have three blades which face into the wind when extracting the energy needed to generate electricity. The blades are attached to a hub which in turn is connected to a generator by means of a gearbox or direct drive mechanism, which are located inside a protective container called a nacelle. This is where the electricity is made. As the blades are turning, they spin the generator to create electricity. A generator is a machine that produces electrical energy from mechanical energy, whereas an electric motor does the reverse.

The nacelle is the large box at the top of the tower where all the main electrical components are located. Figure 2 shows an image which depicts the main elements of a modern wind turbine. Many of the key working parts of a wind turbine are located in the nacelle at the top of the tower and their enclosure within the nacelle reduces noise from the turbine. A schematic of a wind turbine nacelle is shown in Figure 3, with the key components labelled for easy reference.

Tubular towers, which support the nacelle and rotor, are usually made of steel and taper from their base to the top. The entire nacelle and rotor are designed to swing around, or ‘yaw’, in order to face the prevailing wind and extract the maximum amount of energy.

A modern wind turbine is designed to produce high quality electricity whenever enough wind is available. Wind turbines can operate continuously, unattended, and with low maintenance, with a design life of over 20 years. They are highly reliable, with operating availabilities (the proportion of the time in which they could generate if wind conditions were suitable) of up to 98%. Few other electricity generating technologies offer a higher availability.

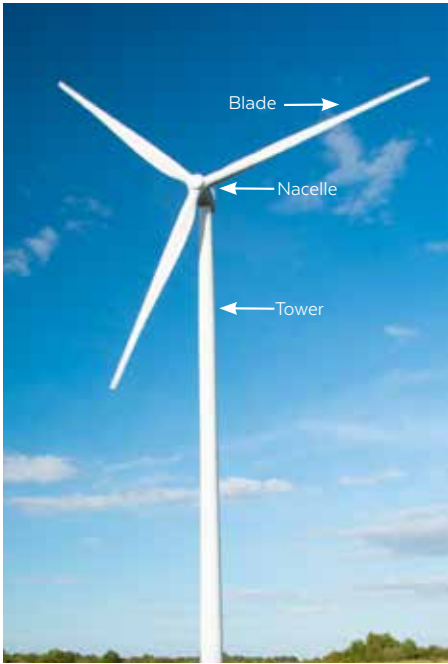


Figure 2 – Image of a Typical Wind Turbine

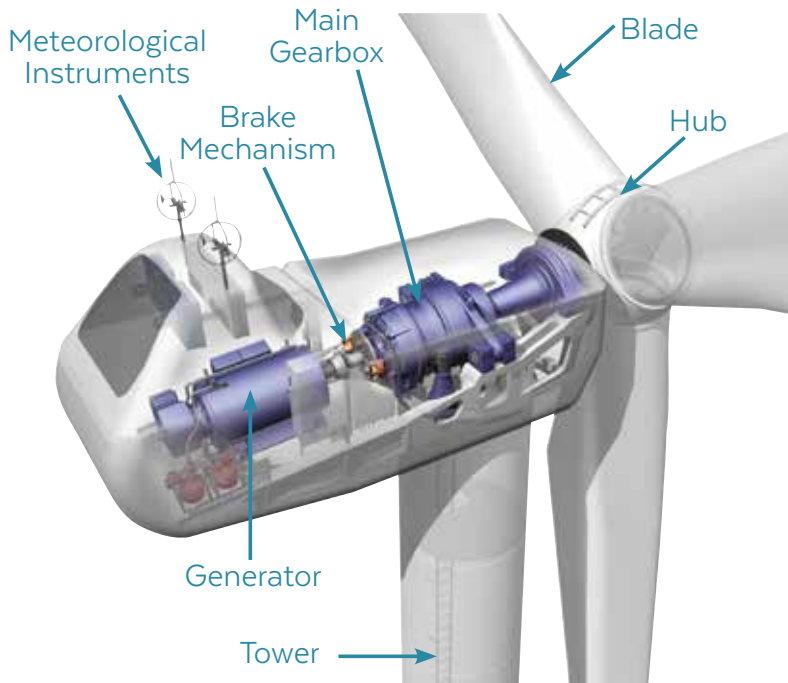


Figure 3 – Schematic of a typical Wind Turbine nacelle

Draft Revised Wind Energy Development Guidelines in Ireland

In 2019, Revised Wind Energy Development Draft Guidelines were issued for public consultation. Key aspects of these Draft Guidelines included:

- 1. Noise Limits**
Noise restriction limits consistent with World Health Organisation standards are proposed. The noise limits will apply to outdoor locations at any residential or noise sensitive properties.
- 2. Visual Amenity Setback**
A visual amenity setback distance, of 4 times the tip height, between a wind turbine and the nearest residential property is proposed, subject to a mandatory minimum setback of 500 metres.
- 3. Shadow Flicker**
It is proposed that technology and appropriate modelling at design stage is adopted to eradicate the occurrence of shadow flicker and must be confirmed in all planning applications for wind energy development.
- 4. Consultation Obligations**
Planning applications must contain a ‘Community Report’ prepared by the applicant which will specify how the final proposal reflects community consultation and the steps taken to ensure that the proposed development will be of enduring economic benefit to the communities concerned and demonstrate adherence to community engagement codes of practice.
- 5. Grid Connection**
From a visual amenity aspect, undergrounding of cable connections from wind farms to the transmission and distribution system is the most appropriate solution, except where specific ground conditions or technical considerations make this impractical.
- 6. Community Dividend**
Wind farm developers will also be required to take steps to ensure that the proposed development will be of enduring economic benefit to the communities concerned.

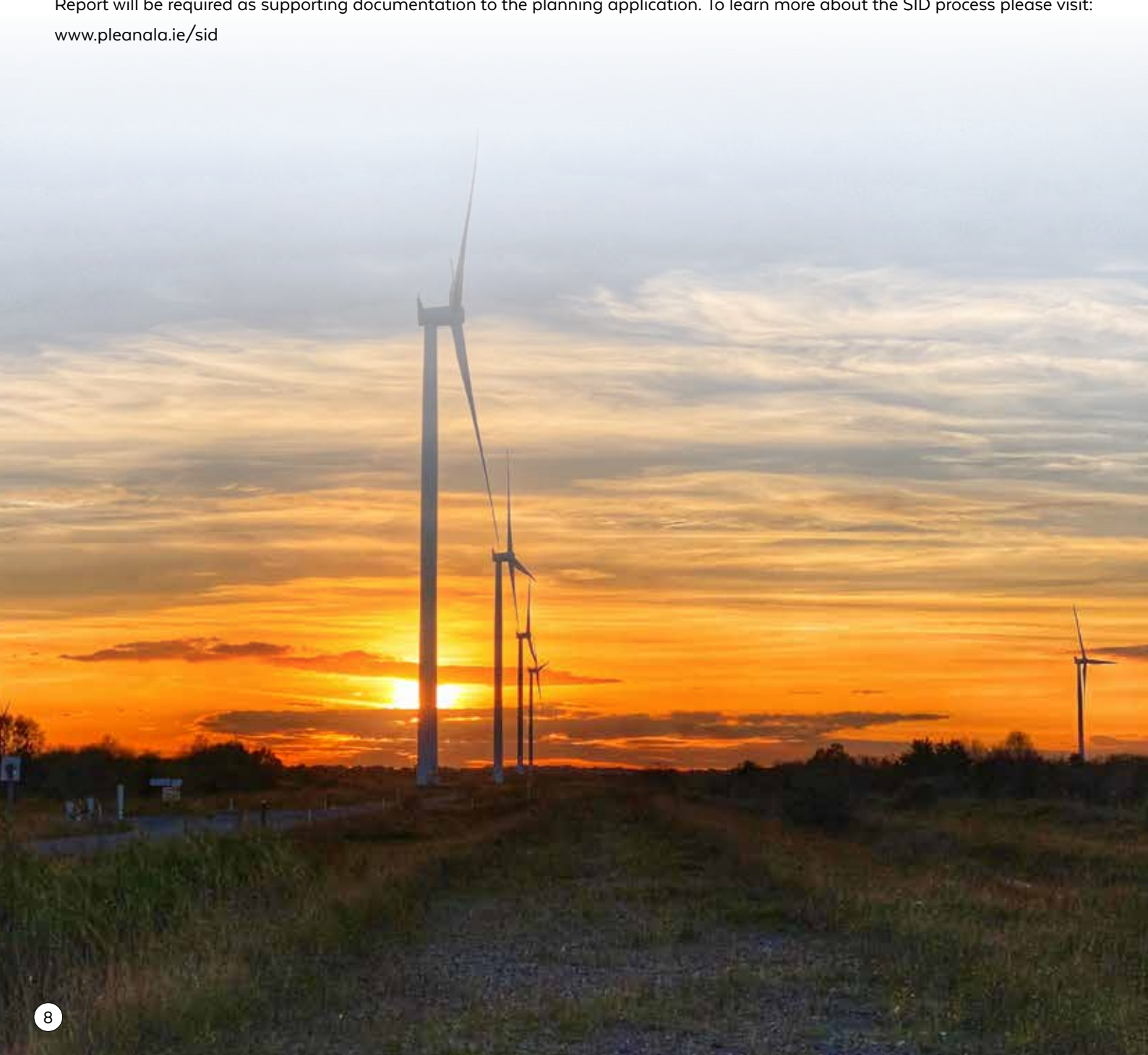
Strategic Infrastructure Development Planning Process Explained

For most large-scale projects, a key consideration is whether a development is Strategic Infrastructure Development (SID) or not? Energy infrastructure which is considered SID* includes:

“An installation for the harnessing of wind power for energy production (a wind farm) with more than 25 turbines or having a total output greater than 50 megawatts” *(as outlined in the Seventh Schedule, Section 1 of the Planning and Development (Strategic Infrastructure) Act 2006).

SID Projects	Non-SID Projects
Planning Application to An Bord Pleanála	Planning Application to Local County Council
Environmental Impact Assessment Mandatory	Environmental Impact Assessment Mandatory in some cases

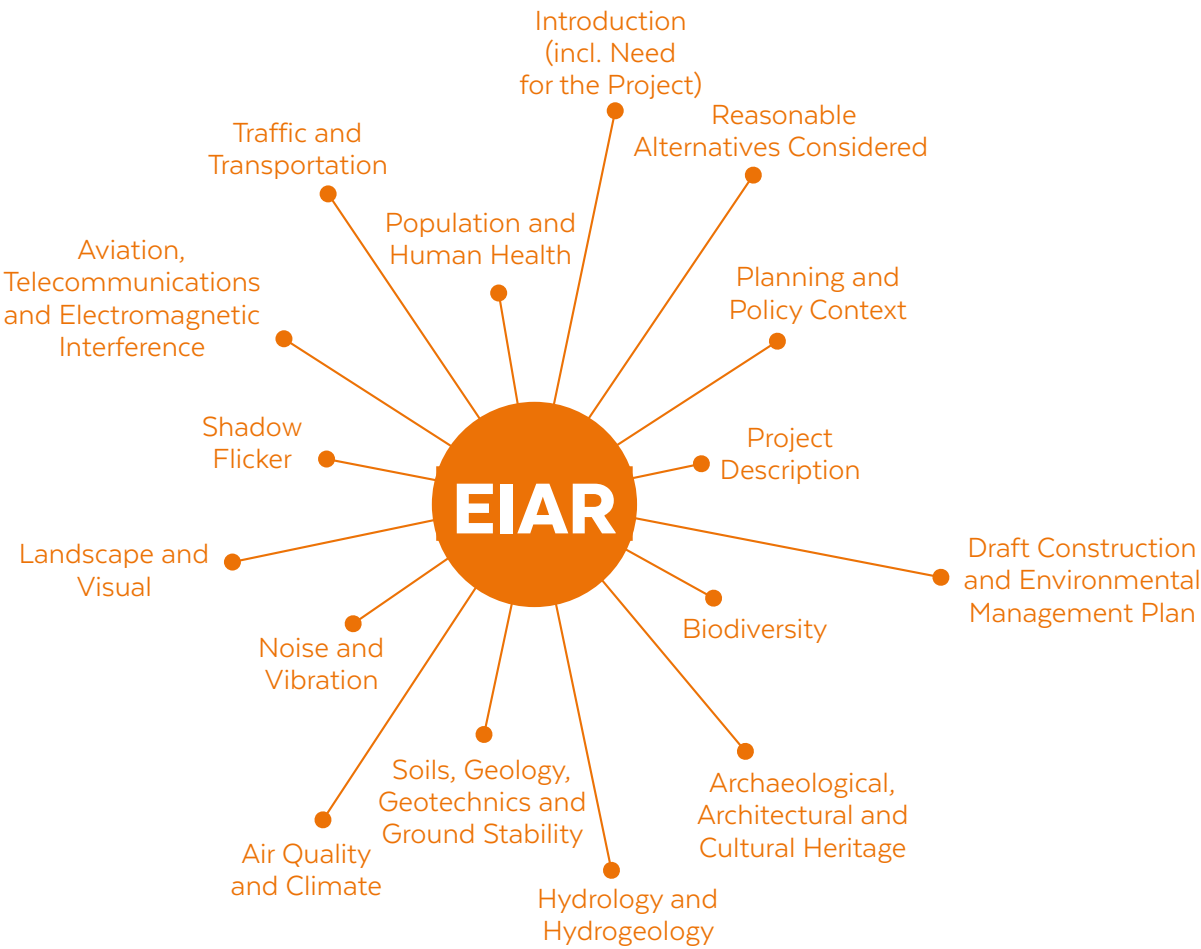
Bord na Móna will need to go through a pre-planning consultation process with An Bord Pleanála to determine with certainty who the consenting authority will be. Irrespective of the Consenting Authority it is our view that an Environmental Impact Assessment Report will be required as supporting documentation to the planning application. To learn more about the SID process please visit: www.pleanala.ie/sid

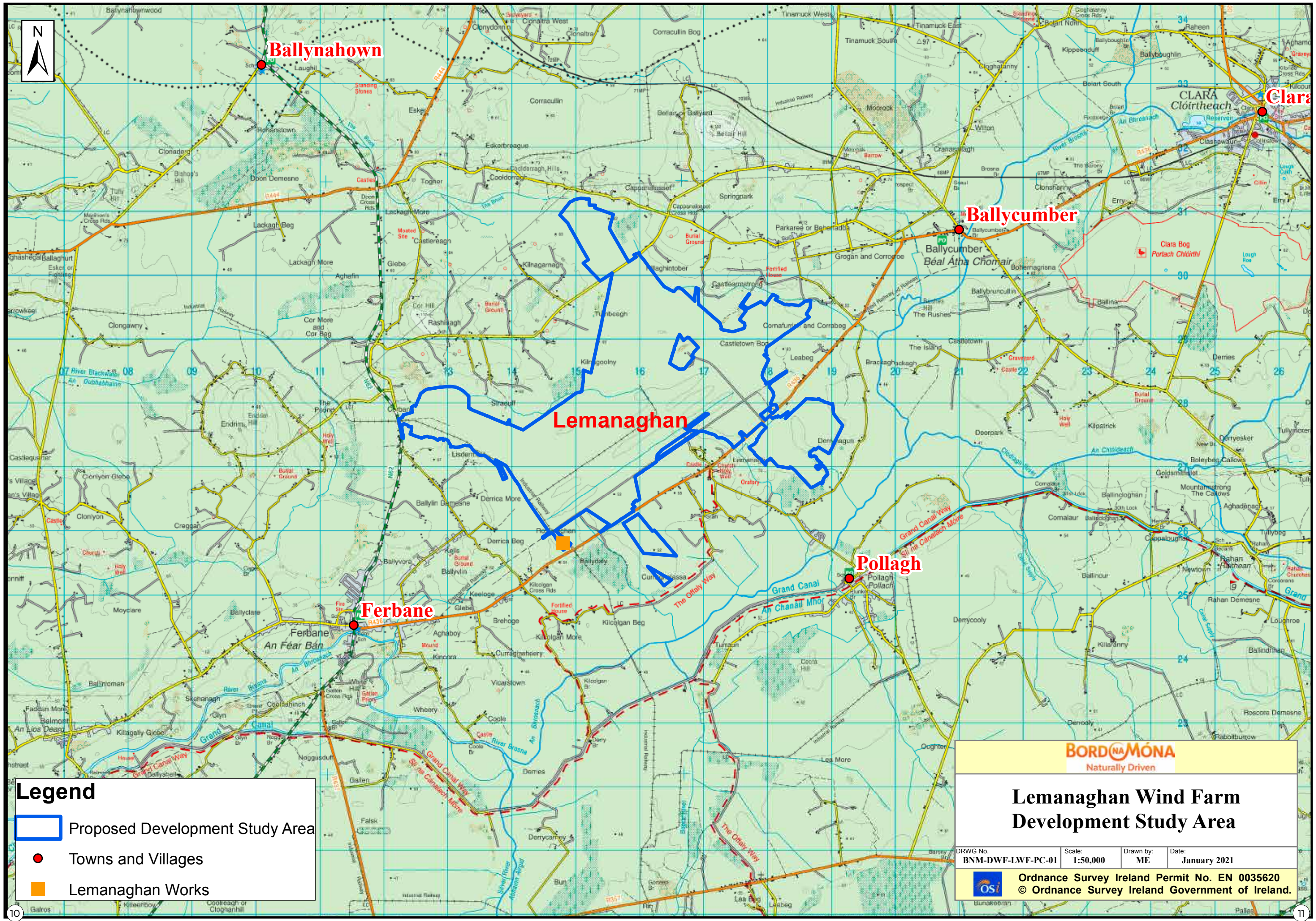


What is included in an Environmental Impact Assessment Report (EIAR)?

Due to the nature and scale of the proposed development an Environmental Impact Assessment (EIA) of the proposed development will need to be carried out. As part of this process, an environmental baseline for the proposed development site will be established through fieldwork and other baseline surveys.

All of this information will be described and documented in an Environmental Impact Assessment Report (EIAR) (formerly known as an Environmental Impact Statement (EIS)) which will accompany the planning application documentation submitted to the appropriate Consenting Authority for consideration. The EIAR will comprise the following chapters as a minimum:





Legend

- Proposed Development Study Area
- Towns and Villages
- Lemanaghan Works

BORD na MÓNA
Naturally Driven

Lemanaghan Wind Farm Development Study Area

DRWG No. BNM-DWF-LWF-PC-01	Scale: 1:50,000	Drawn by: ME	Date: January 2021
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Landscape and Visual Impact Assessment

A typical tool utilised in the assessment of the visual impact of a wind farm is a Photomontage. Photomontages are visualisations that superimpose an image of a proposed development upon a photograph or series of photographs and are used to illustrate the potential impact of a development on the existing landscape. A number of photomontages will be created as part of the Landscape and Visual Impact Assessment (LVIA) for the proposed wind farm.

Photomontages were produced as part of the LVIA for Mountlucas Wind Farm during the planning application process. A comparison of one of the photomontages generated for the LVIA, and a photograph taken from the same location post construction, is shown below. It illustrates the effectiveness and accuracy of this tool when applied to this type of development. Samples of the photomontages which will form part of the LVIA for this proposed development will be provided at the next round of Community Information Sessions.



Benefits of the Development

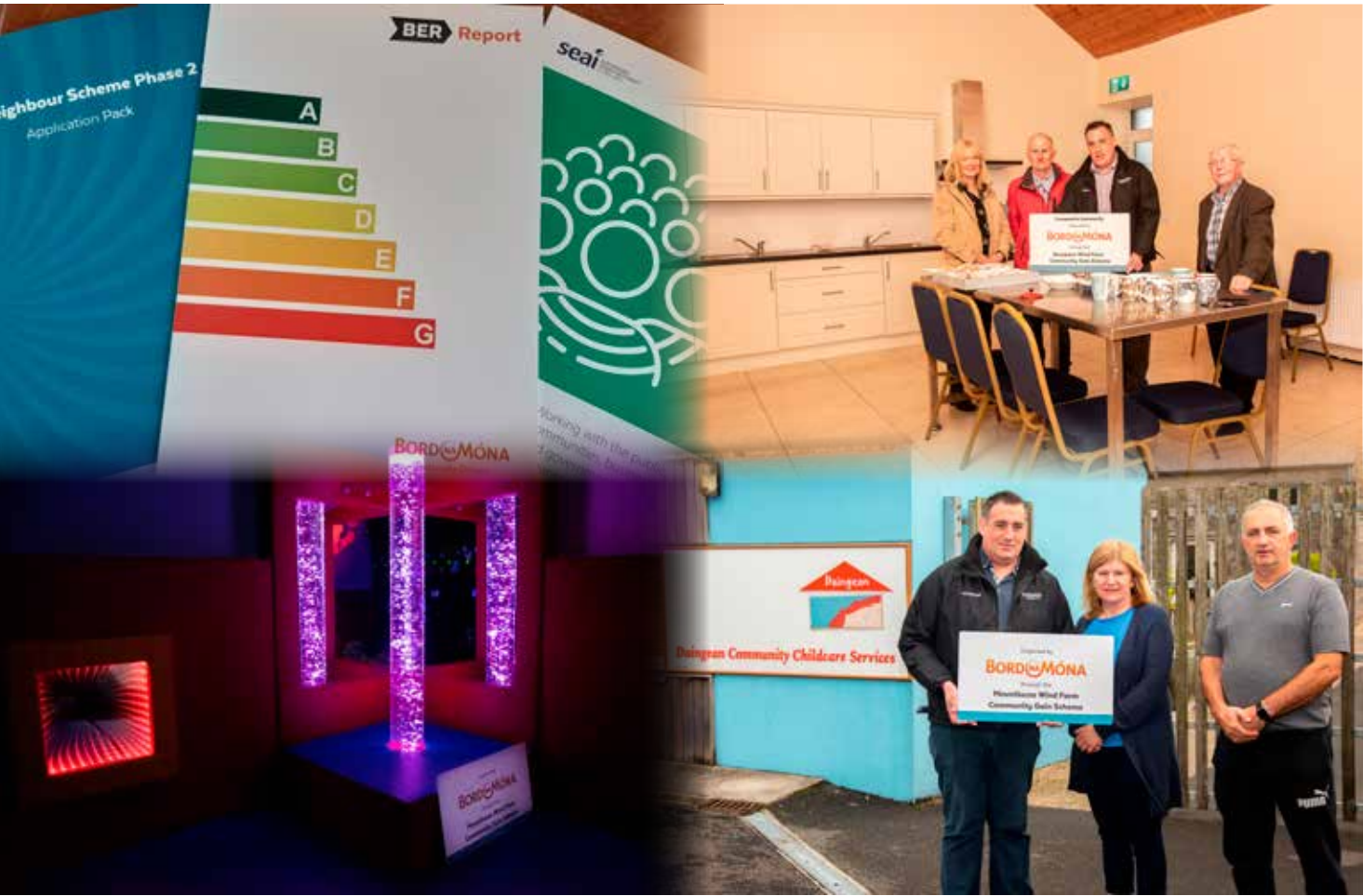
The proposed development will give rise to a range of benefits at different levels:

At a Local Level, benefits arising from the construction and operation of the proposed wind farm will include:

- Community Benefit Fund.
- 80 to 100 jobs at peak construction.
- Substantial rates paid to the relevant Local Authority.
- Upgrading of the road infrastructure in the vicinity of the wind farm (as required).
- Payment of taxes from the project, and dividends from Bord na Móna to the State.
- Supporting a number of long term, high quality technical jobs in operations and maintenance.
- Indirect employment created through the sub-supply of a wide range of products and services.

At a Regional Level, the new development will help to supply the rising demand for electricity, resulting from renewed economic growth in the Midlands region. During construction, additional employment will be created in the region through the supply of services and materials to the wind farm.

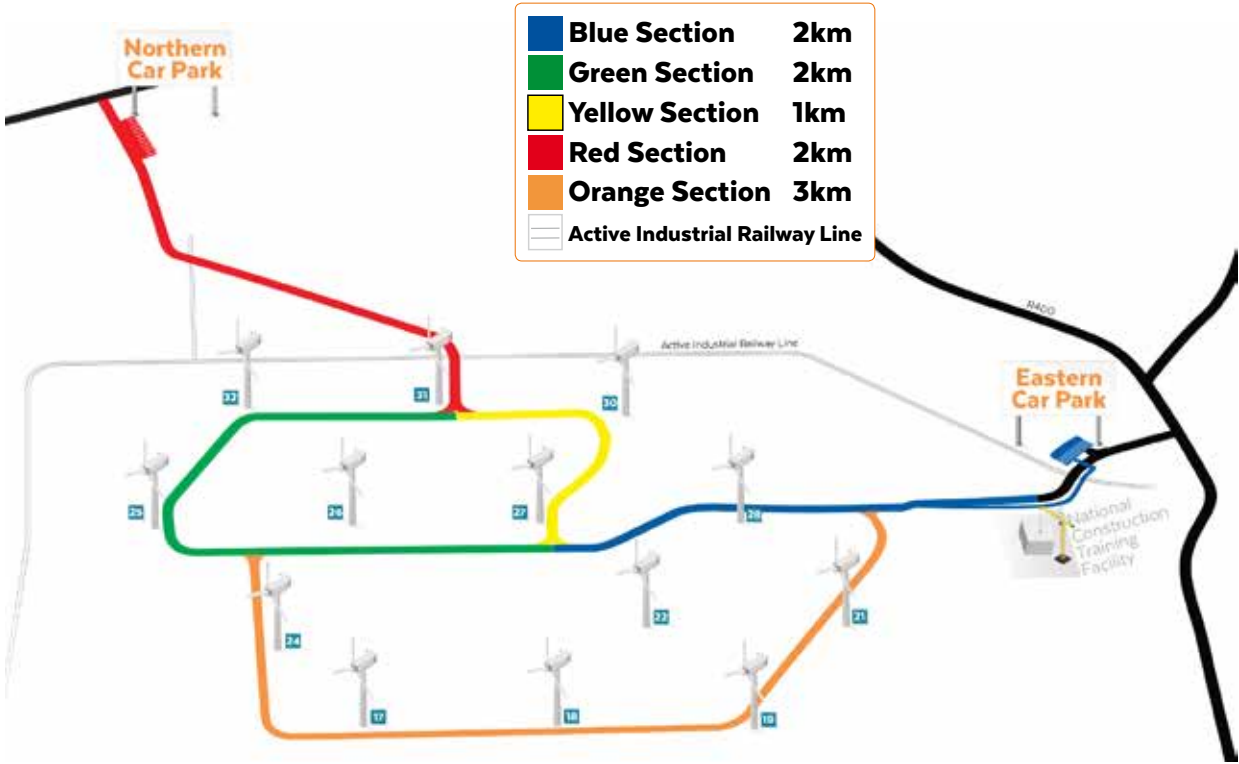
At a National Level, the new development will play a significant role in contributing to the country's national renewable electricity production and carbon emissions reduction targets by 2030, while also supporting a growing economy and population. During operation, the wind farm will eliminate the need to generate the equivalent amount of electricity from fossil fuels, and it will therefore help to reduce total national greenhouse gas emissions. In doing so, it will reduce our dependence on external energy sources, help improve our energy security of supply and make a major contribution to Ireland's Climate Action Plan 2019, which has set a target of 8.2GW of onshore wind capacity by 2030.



Potential Wind Farm Recreational Facilities

Public Walkway – Cycleway

Mountlucas Wind Farm consists of a 10 km walkway / cycleway around the wind farm. It is generally accessible all year round – free of charge with onsite parking facilities at both the Northern and Eastern access points. This amenity is for walking, running and cycling and it is hoped to incorporate similar amenities as part of the proposed Lemanaghan Wind Farm. Since 2016, over 180,000 visits have been made to the wind farm’s amenity facilities.



Community Engagement

1st Public Consultation: Spring 2021 – Consultation Sessions

2nd Public Consultation: Summer/Autumn 2021 – Draft Layout Consultation Sessions

Bord na Móna will engage on an ongoing basis with the local communities regarding the development of the proposed Lemanaghan Wind Farm through:

- Community Liaison Officer – House visit – *subject to Covid-19 restrictions
- Community Liaison Officer – Request a Call Back
- Community Engagement Clinic (by appointment) – *subject to Covid-19 restrictions
- Online Community Engagement Clinic (by appointment)
- Dedicated project website – www.lemanaghanwindfarm.ie
- Virtual Consultation Room
- Project Information Pack will be delivered by door to door house calls in the vicinity of the proposed wind farm – *subject to Covid-19 restrictions

Community Engagement Clinics

Subject to Covid-19 restrictions, Bord na Móna Powergen intend to hold Community Engagement Clinics in the locality in the coming months. In order to ensure the safety of both our employees and members of the public due to Covid-19, and that all social distancing requirements and Government health guidelines are adhered to, these Community Engagement Clinics will be held by appointment only. If we are not in a position to hold these Clinics in person, we will endeavour to hold them virtually via Zoom or Teams.

If you would like to find out more about the Clinics and provisionally put your name down for an appointment, please contact the clinic Co-ordinator on 087-9460284.



Frequently Asked Questions

1. How many turbines are proposed for the development?

As the project is at an early stage the number and location of turbines has not yet been determined.

2. Where will the power from the proposed wind farm go?

The electricity generated by the turbines would be transmitted directly onto Ireland’s National Grid which is managed by EirGrid for distribution around the country. The proposed development will also make a significant contribution to Irelands Climate Action Plan 2019, which has a set a target of 8.2GW of onshore wind capacity by 2030.

3. What works are the project team currently undertaking?

Over the coming months, in order to determine the extent of the proposed development Bord na Móna will undertake a number of on-site surveys on Lemanaghan Bog, such as ecology surveys, ornithology surveys, aquatic surveys, heritage surveys and site investigation works. Additionally the company will also commence a series of off-site surveys, such as noise monitoring at sensitive receptors around the site and topographical surveys of the proposed grid connection and proposed haul routes.

4. What Information will be provided at the next stage of public consultation which is planned for Summer/Autumn 2021?

The draft wind turbine layout will be available at the 2nd round of public consultations and will provide detail on the setback distance, location, height and number of proposed turbines. Information will also be provided on the proposed substation locations for the development. The project team will also have a subset of Photomontages available that will show what the proposed development may look like from the area. For more information on Photomontages please refer to page 12.

How you can Get in Touch

Our Community Liaison Officer - Colm is available to discuss residents’ queries or concerns in relation to the proposed development. Please feel free to contact him by phone or email to enquire about any aspect of the project. Call Colm on: 087 4143305 (9 a.m. to 5 p.m. Monday to Friday) or Email: lemanaghanwindfarm@bnm.ie



Colm

About Bord na Móna

Bord na Móna is an iconic Irish company operating four business units – Powergen Development, Resource Recovery, Energy and New Business. Over 80 years ago, Bord na Móna was established to develop Ireland’s peat resources for the economic benefit of Ireland. Ireland’s urgent need to support positive climate action measures means the company is now managing its land in a very different way.

As part of its Brown to Green Strategy, Bord na Móna is implementing an extensive peatland rehabilitation programme and expanding its low carbon operations as well as its Resource Recovery and recycling business. A key objective of this strategy involves using the land to continue to underpin Ireland’s energy independence by developing green, sustainable energy sources to assist with Ireland’s commitment to achieve 70% renewable electricity by 2030.

The company is rapidly decarbonising and as it does it is building a new, more sustainable business and rural economy. Bord na Móna has a strong record of siting, designing and delivering wind farms within its cutaway peat lands, such as Bellacorick, Bruckana, Mountlucas and Oweninny Wind Farms.



Overview of Bord na Móna Powergen Projects*

*correct as of time of print, March 2021.



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