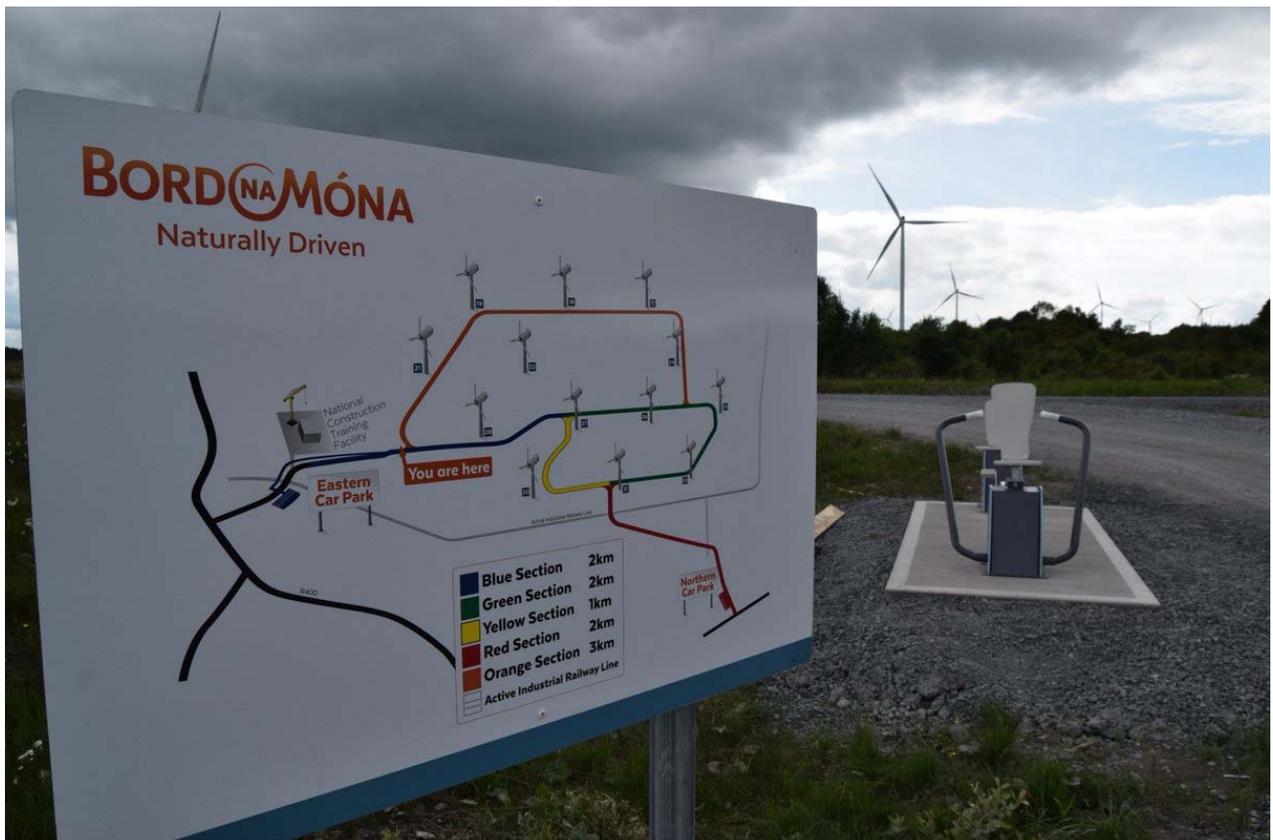


# BORD<sup>NA</sup>MÓNA

Naturally Driven

## Derrinlough Wind Farm – Community Report



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## 1. Introduction

This report has been prepared to record the consultation carried out with the local community in respect of the proposed Derrinlough Wind Farm development. Bord na Móna Powergen Ltd. has carried out extensive consultation in relation to the proposed development with members of the public, residents and community groups. The objective of the consultations was to ensure that the views and concerns of all were considered as part of the project design and Environmental Impact Assessment (EIA) process.

The Wind Energy Development Guidelines<sup>1</sup> (2006) state that:

*“While it is not a mandatory requirement, it is strongly recommended that developers of a wind energy project should engage in active consultation and dialogue with the local community at an early stage in the planning process, ideally prior to submitting a planning application”.*

This was further addressed in the Preferred Draft Approach to Wind Energy Development in Ireland<sup>2</sup> (June 2017) which stated the following with respect to planning applications for wind farms:

*“Planning applications must contain a Community Report prepared by the applicant which will specify how the final proposal reflects community consultation. The Community Report must also outline steps taken to ensure that the proposed development will be of enduring economic benefit to the communities concerned”.*

The Draft Revised Wind Energy Guidelines<sup>3</sup> (Department of Housing, Planning and Local Government, 2019) has retained this position stating the following:

*“In order to promote the observance of best practice, planning authorities should require applicants to prepare and submit a Community Report with their planning application and a condition on any subsequent planning permission should require developers to carry out the development in accordance with the approved Community Report”.*

This report outlines the consultation and community engagement initiatives undertaken by Bord na Móna Powergen Ltd. prior to the submission of the planning application. It also outlines the main issues identified during this process, how the final proposal reflects community consultation and the steps taken to ensure that the proposed development will be of enduring economic benefit to the communities concerned.

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<sup>1</sup> The Department of the Environment, Heritage and Local Government, Wind Energy Planning Guidelines 2006, p. 19

<sup>2</sup> The Department of Communications, Climate Action and Environment and Department of Housing, Planning, Community and Local Government, Information Note Review of the Wind Energy Development Guidelines 2006 “Preferred Draft Approach”, 2017 p.8

<sup>3</sup> The Department of Housing, Planning and Local Government, Draft Revised Wind Energy Development Guidelines 2019, p. 42

## 2. Consultation with the Local Community

### 2.1 Notification of Local Representatives

In advance of engagement with the local community, Bord na Móna Powergen Ltd. by way of written communication in April 2018, informed Offaly County Councillors for the Municipal District of Birr, of the company's intention to develop a wind farm on Clongawny and Drinagh bogs to be known as Derrinlough Wind Farm.

As part of this communication, the Councillors for the Municipal District of Birr were invited to attend an initial briefing session on 23<sup>rd</sup> April 2018 in the County Arms Hotel in Birr. The purpose of this briefing session was to provide them with information on the proposed development in advance of the first round of Community Information Sessions. Four Councillors attended this briefing session.

Ahead of the second round of Community Information Sessions, a second briefing session for the Councillors of the Municipal District of Birr was held on 26<sup>th</sup> November 2018. The purpose of this session was to provide Councillors with more information on the proposed development, namely the proposed turbine layout.

In November 2019, by way of written communication, Councillors of the Municipal District of Birr were issued a copy of the revised layout for the proposed development.

In addition to informing the Councillors of the Municipal District of Birr about the proposed development as outline above, all TDs representing the Dáil Éireann Constituency of Offaly were issued a briefing note in April 2018, November 2018 and November 2019 regarding the proposed development.

### 2.2 Notification of Local Community

To inform local residents about the proposed development, the project Community Liaison Officer distributed information regarding the proposed development to households within approx. 2 km of the proposed development site boundary. The Community Liaison Officer visited approx. 600 homes between 9<sup>th</sup> and 13<sup>th</sup> April 2018. The information distributed to each household consisted of an information leaflet on the proposed development which included details of the Community Information Sessions. (See Appendix A). The leaflet contained information on the following:

- Project contact details
- Indicative Project Timeline;
- Visit to Mountlucas Wind Farm;
- Community Engagement Information; and
- A Map of the Location of the Proposed Development Site.

## 2.3 Community Information Sessions - Round One

Bord na Móna Powergen Ltd. organised a series of Community Information Sessions to be held in the villages closest to Clongawny and Drinagh bogs, namely, Cloghan, Rath and Banagher.

The first round of Community Information Sessions were held between 24<sup>th</sup> and 26<sup>th</sup> April 2018 from 3-9pm each day, in the following venues:

- 24<sup>th</sup> April 2018: Saint Mary's Parish Hall, Cloghan;
- 25<sup>th</sup> April 2018: Drumcullen GAA Club, Rath; and
- 26<sup>th</sup> April 2018: Banagher Community Centre.

### 2.3.1 Print Advertisement of Community Information Sessions

For two weeks prior to the Community Information Sessions events, details of the Sessions were advertised in three local papers, namely the Offaly Independent, Offaly Express and Midland Tribune commencing week beginning the 9<sup>th</sup> April.

An information note was also circulated to the Parish Priests of Banagher and Cloghan for inclusion in the weekly mass newsletter.

### 2.3.2 Broadcast Advertisement of Community Information Sessions

Details of the Community Information Sessions were broadcast on local radio (Midlands 103) three times daily from the 19<sup>th</sup>-24<sup>th</sup> April 2018 to inform the local community of the dates, times and venues of the sessions.

### 2.3.3 Attendance and Feedback

Over the three days approximately 100 people attended the Sessions. Attendees were provided with an A3 map of the location of the proposed development and an information booklet (Appendix B). As the project was at a very early stage, Bord na Móna Powergen Ltd. did not have information on the proposed turbine locations but did indicate the project could potentially be of similar scale to other proposed Bord na Móna wind farms such as the proposed Cloncreen Wind Farm in east Offaly and the proposed Derryadd Wind Farm in south Longford.

At the sessions, there were a series of information panels on display that contained details on the following:

- Proposed Location of the Development;
- The Necessity of Wind Energy Development in The Context of National Policy;
- The Suitability of Bord Na Móna Peatlands for Wind Energy;
- Criteria for Site Selection;
- Preferred Draft Approach to Wind Energy Development in Ireland;
- Strategic Infrastructure Development Planning Process;

- Environmental Impact Assessment Report;
- Visual Impact Assessment;
- Project Benefits;
- Complementary Uses of Cutaway Peatlands;
- Potential Wind Farm Recreational Facilities;
- Indicative Project Timeline; and
- Community Engagement.

Members of the public were invited to submit comments, concerns and opinions regarding the proposed development through a feedback form at the Sessions. Attendees were also given the opportunity to put their name forward for a visit to Mountlucas Wind Farm in Co. Offaly. In total two people expressed interest in visiting Mountlucas Wind Farm.

The main queries raised during this stage of the consultation, as recorded by Bord na Móna Powergen Ltd. staff at the sessions, were:

1. Proximity to houses;
2. Community Gain Scheme;
3. Number of Turbines;
4. Near Neighbour Scheme;
5. Noise;
6. Height of turbines;
7. Visual Impact; and
8. Wind Farm Amenities.

Following the Community Information Sessions, the Community Liaison Officer revisited all of the approx. 600 homes within the 2km area and provided them with a copy of the A3 map, Information Booklet and feedback questionnaire that was available at the Sessions.

## 2.4 Community Information Sessions - Round Two

A second round of Community Information Sessions were held in November 2018 when the project design had progressed to draft turbine layout stage. The second round of Community Information Sessions were held between the 27<sup>th</sup> - 29<sup>th</sup> November 2018 in the same three locations as the first round from 3-9pm each day, as follows:

- 27<sup>th</sup> November 2018: Saint Mary's Parish Hall, Cloghan;
- 28<sup>th</sup> November 2018: Drumcullen GAA Club, Rath; and
- 29<sup>th</sup> November 2018: Banagher Community Centre.

In advance the Community Liaison Officer circulated letters to all homes within 2km of the proposed development site boundary to inform them of the dates, times and venues of the Community Information Sessions.

### 2.4.1 Print Advertisement of Community Information Sessions

The second round of Community Information Sessions were advertised in two local papers, namely the Offaly Independent and Midland Tribune commencing week beginning the 16<sup>th</sup> of November for one week to inform residents of the Community Information Sessions.

An information note was also circulated to the Parish Priests of Banagher and Cloghan for inclusion in the weekly mass newsletter.

### 2.4.2 Broadcast Advertisement of Community Information Sessions

Details of the Community Information Sessions were broadcast on local radio (Midlands 103) three times daily on the 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup> and 26<sup>th</sup> of November 2018 to inform the local community of the dates, times and venues of the sessions.

### 2.4.3 Attendance and Feedback

Over the three days approx. 100 people attended the Sessions. Attendees were provided with an A2, double-sided map of the proposed development. The maps contained the locations of the proposed turbines and distance bands to sensitive receptors out to 2 km from a turbine to enable members of the community identify the proximity of the nearest turbine to their residential property (Appendix C). An information brochure was also available for attendees to provide them with more comprehensive information on the proposed development (Appendix C).

At the sessions, there were a series of information panels that contained details on the following:

- Proposed Location of the Development;
- The Necessity of Wind Energy Development in the Context of National Policy;
- Preferred Draft Approach to Wind Energy Development in Ireland;
- Site Layout Design;
- Proposed Development;
- Proposed Turbine Locations;
- Setback Distance from Properties;
- Strategic Infrastructure Development Planning Process;
- Environmental Impact Assessment Report;
- Photomontages of the Proposed Development;
- Local Benefits of the Project; and
- Potential Wind Farm Recreational Facilities.

The main queries raised during this stage of the consultation, as recorded by Bord na Móna Powergen Ltd. staff at the sessions, were:

1. Near Neighbour Scheme;
2. Proximity of Turbines to Houses;
3. Number of Turbines;

4. Height of Turbines;
5. Wind Farm Amenities;
6. Noise;
7. Visual Impact;
8. Community Gain Scheme; and
9. Roads/Local infrastructure.

Following the second round of Community Information Sessions, the Community Liaison Officer circulated a copy of the information brochure and map, that was available at the sessions, to all homes within 2km of a proposed turbine.

## 2.5 Publication of Final Layout

In November 2019, Bord na Móna Powergen Ltd. issued a revised layout for the proposed development on an A2 double-sided map to homes within 2km of a proposed turbine. The map depicted the proposed final turbine layout, substation location, internal road infrastructure and amenity pathways. The map also included distance bands out to 2km from a proposed turbine to enable members of the community identify the proximity of the nearest turbine to their residential property (Appendix D).

## 2.6 Direct Correspondence and Meetings

As outlined in the preceding sections, Bord na Móna Powergen Ltd. engaged with the local community on an ongoing basis throughout the pre-planning stage through Community Information Sessions, written communication with households and meetings with local representatives.

In addition to this, at the request of individuals, Bord na Móna Powergen Ltd. also facilitated eight meetings with individual residents to discuss the proposed project and ideas/issues/concerns they had in relation to the proposed development.

## 2.7 Dedicated Contact Details

Since the project was first announced in April 2018, Bord na Móna Powergen Ltd. has provided dedicated contact details for the proposed development, including a dedicated phone number, email address and postal address. To date, these channels have facilitated over 44 enquiries about the proposed development.

## 2.8 Project Website

In April 2018, Bord na Móna Powergen Ltd. launched a dedicated project website, [www.derrinloughwindfarm.ie](http://www.derrinloughwindfarm.ie). The website is an additional communications channel to keep members of the public informed about the proposed development. Information distributed at the Community Information Sessions or through other communication channels are provided

on the website and includes information on the proposed location, information leaflets, layout maps and dedicated contact details for the project.

## 2.9 Community Liaison Officer

In April 2018, Bord na Móna Powergen Ltd. appointed a dedicated Community Liaison for the proposed development to ensure continued on the ground engagement with the local community. As outlined above, the Community Liaison has visited homes in the locality of the proposed development on a number of occasions to ensure they are kept informed about the project.

## 2.10 Engagement with Community Groups

The Code of Practice for Wind Energy Development in Ireland<sup>4</sup> (2016) requests that all community groups local to the proposed development should be provided with the same information material as provided to local residents.

As Bord na Móna Powergen Ltd. did not have a database of community groups in the vicinity of the proposed project we liaised with the Offaly Public Participation Network (PPN) to determine the most suitable way to contact community groups with information on the project. Due to Data Protection, Offaly PPN could not share contact information with us, but agreed to circulate copies of the information material to all relevant community groups, on our behalf.

Approximately 70 community groups were identified in the areas adjacent to the proposed development and the following information was distributed to these groups during the pre-planning phase:

- April 2018 – Cover Letter and Information Leaflet (Appendix A) depicting a map of the proposed development site and details of the upcoming first round of Community Information Sessions.
- November 2018: Letter notifying and inviting community groups to the upcoming second round of Community Information Sessions.

Contact details were also provided if any of the groups wanted additional information on the project or wanted to request a meeting with the project team to discuss the proposed development.

## 3. Community Input into Proposed Development

### 3.1 Number of turbines/Setback distance

Following the second series of Community Information Sessions in November 2018, the draft layout of the proposed development was revised internally from 28 to 24 turbines. This decrease in the number of turbines arose from a combination of factors including feedback

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<sup>4</sup> Department of Communications, Climate Action and the Environment, Code of Practice for Wind Energy Development in Ireland - Guidelines for Community Engagement, 2016.

from the project team on site investigations and baseline assessments in addition to feedback received at the Community Information Sessions which is addressed below.

At the second round of Community Information Sessions, the project team received feedback that a number of sensitive receptors did not appear to be included on our database. After the consultation event this was investigated by the project team and it transpired that during the initial design phase these properties had been identified as uninhabited dwellings given their location and relative inaccessibility from the local road. Following a site visit by the Community Liaison Officer/Stakeholder Manager, accompanied by the property owners, it was determined that the buildings, should be included on the sensitive receptor database. Following this decision, a full review of all buildings within 2 km of the proposed development boundary was conducted to ensure that all sensitive receptors were included on the database for the final turbine layout design.

In advance of the publication of the final layout as outlined Section 2.5, a planning application was lodged to Offaly County Council in August 2019 for proposed amendments to the permitted Cloghan Wind Farm which is proposed for the lands adjacent to north / north-west Drinagh.

Due to the proposed amendments to Cloghan Wind Farm (which comprised an increase in turbine tip height and the micro-siting of six turbines) the layout for Derrinlough Wind Farm was further revised to a 21-turbine layout.

### 3.2 Amenity Pathways and Carparks

During both the first and second round of Community Information Sessions members of the local community expressed an interest in having amenity access to the proposed development site once the wind farm was operational. Consequently, it is envisaged that approximately 18 km of the internal road network will be opened for amenity use once the wind farm becomes operational.

In addition, a number of local residents and community groups expressed a desire for a connection between any proposed amenity pathways provided as part of the proposed development and Lough Boora Discovery Park. On this basis, the proposed development will include a link eastwards from Drinagh, through Derrybrat to the R437 to facilitate future potential connectivity with Lough Boora.

## 4. Enduring Economic Benefit

Bord na Móna Powergen Ltd. recognises that the Preferred Draft Approach to Wind Energy Development in Ireland<sup>2</sup> (June 2017) and the Code of Practice for Wind Energy Development in Ireland<sup>4</sup> (December 2016) stipulates that wind farm developers should identify enduring economic benefit to the communities concerned from the proposed development and should also highlight short term economic benefits to the communities concerned.

## 4.1 Short Term Economic Benefits

During the construction phase, it is estimated that at peak construction between 100-120 jobs will be created. This in turn will have a knock-on effect on the local economy through the supply of services to the workforce. While at a regional level additional employment will be created in the region through the supply of services and materials (such as stone and concrete) to the wind farm.

Additionally, the payment of a development contribution to Offaly County Council in respect of public infrastructure and facilities will potentially provide benefits to the local community through schemes such as the refurbishment, upgrading or replacement of roads, car parks and car parking places; sewers and waste water facilities, drains or water mains; provision of open spaces/parks, community facilities, amenities and landscaping works etc.

## 4.2 Long Term Economic Benefits

The proposed project will provide many long term economic benefits to the communities surrounding the proposed development as outlined in the following sections.

### 4.2.1 Employment

Once operational, the wind farm will support 6-8 long term, high quality technical jobs in operation and maintenance.

### 4.2.2 Rates

Annual rates paid by the wind farm to Offaly County Council will potentially support the provision of local services.

### 4.2.4 Community Benefit Fund

In addition, a range of other benefits associated with the development will be provided to local residents (Near Neighbours) and local community through an annual Community Benefit Fund.

The Funds shall be distributed to as follows:

- Households within a prescribed distance of a wind turbine will be offered an annual contribution which can be put towards their electricity usage; the completion of energy measures on the property; purchase of electric vehicle and/or education support. This is in line with existing near neighbour schemes that are active at Bord na Móna's Mountlucas Wind Farm and Bruckana Wind Farm.
- Local Community Groups and not-for-profit organisations around the proposed development that promote the sustainable development of the area. A key criterion is that the projects and initiatives will benefit the communities surrounding the wind farm.

The value of the fund for the Community Benefit Fund will be directly proportional to the installed capacity and/or energy produced by the wind farm, which based on current proposals, could be in the region of €10 million over the lifetime of the project.

#### 4.2.6 Renewable Energy Participation Scheme (REP Scheme)

Public Consultation on the Renewable Electricity Support Scheme (RESS) 1 closed for submissions in January 2020. The consultation paper set out the high-level details for the provision of a Renewable Energy Participation Scheme (REP Scheme) in Annex C (REP Scheme) for Community Participation in renewable developments. The key element proposed is:

- Providing Irish Citizens, or not for profit community entities (to be defined), to invest in renewable electricity generation projects in the Republic of Ireland - prioritising those that live in closer proximity to the Relevant Projects.

The Department of Communications, Climate Action and Environment envisage finalisation of the RESS Scheme in 2020.

#### 4.2.7 Amenity Pathways

As part of the proposed development it is intended that approximately 18 km of the proposed wind farm's internal road network will be open for public use once the wind farm becomes operational. It is also proposed to provide additional amenity links to include three access points from the adjacent road network and future potential connectivity to Lough Boora Discovery Park.

## 5. Conclusion

Bord na Móna Powergen Ltd. has actively engaged and consulted with the local community from an early stage during the pre-application phase. The consultation process has been an extremely valuable exercise and has provided a detailed, and enhanced understanding of the key issues and concerns of the local community, which have ultimately shaped the final project proposal.

The development of the proposed Derrinlough Wind Farm will provide an enduring economic benefit to the communities surrounding the proposed development as outlined in Section 4 namely, the extensive amenity pathways and potential for future linkage with Lough Boora Discovery Park, the community benefit package for both residents and community groups, employment during the construction and operation of the development and through the annual rates payable to the local authority.

# Appendix A – Project Newsletter Spring 2018

## Community Engagement

In order for members of the local community to be informed about the proposed development, Bord na Móna has arranged three Community Information Sessions and invites you to attend one of these. The details of the sessions are as follows:

- Tuesday 24th April 2018: 3 - 9pm Saint Mary's Parochial Hall, Ferbane Street, Cloghan
- Wednesday 25th April 2018: 3 - 9pm Drumcullen GAA Clubhouse, Rath
- Thursday 26th April 2018: 3 - 9pm Banagher Community Hall, Cuba Avenue, Banagher (beside Health Centre)

The Company intends to hold further pre-planning Community Information Sessions before the end of 2018. In addition, Bord na Móna will continue to engage on an ongoing basis with the local communities regarding the development of the proposed Derrinlough Wind Farm through the following:

- Door to door calls in the vicinity of proposed wind farm
- Community Liaison Officer
- Project Clinic (by appointment)
- Organised visits to Mountlucas Wind Farm
- Focus Groups independently facilitated\*
- Dedicated project website - [www.derrinloughwindfarm.ie](http://www.derrinloughwindfarm.ie) - go live date 27th April 2018
- Project newsletter

\* Typical Focus Group Topics: Benefits/Community Dividend, Planning Process, Key Concerns

## How can you get involved in the focus groups?

Contact our Community Liaison Officer at [derrinloughwindfarm@bnm.ie](mailto:derrinloughwindfarm@bnm.ie), 045-439800 or at the Community Information Sessions.

## Visit Mountlucas Wind Farm

Bord na Móna organises group or individual tours of Mountlucas Wind Farm for anyone who is interested. You can also make your own arrangements by contacting a member of Mountlucas Wind Farm staff who will provide you with a personal tour of the site. To book a tour please email [mountlucaswindfarm@bnm.ie](mailto:mountlucaswindfarm@bnm.ie)

Alternatively, if you don't wish to take part in a tour you can visit the wind farm yourself. Our 10km public walkway/cycleway is open to the public with on-site parking facilities available on both the R402 (Edenderry to Daingean road) and the R400 (Mount Lucas to Portarlinton road). All tours and access to the walkway/cycleway are free of charge.



## Contact Us

The proposed Derrinlough Wind Farm will benefit from participation by the local community during each stage of the development. If you wish to express interest in taking part in a focus group or require further information about the project please contact us at: [derrinloughwindfarm@bnm.ie](mailto:derrinloughwindfarm@bnm.ie), on 045-439800 or speak to a representative at one of the Information Sessions.

045-439800 [derrinloughwindfarm@bnm.ie](mailto:derrinloughwindfarm@bnm.ie)

# Proposed Derrinlough Wind Farm

Project Newsletter Spring 2018



**Dear Resident,**

For the last eight decades Bord na Móna has underpinned Ireland's energy security by supplying peat from Irish bogs to Ireland's power stations and briquette factories. By 2030 the company will cease harvesting energy peat but will strive to continue to underpin Ireland's energy independence by using green sustainable energy sources.

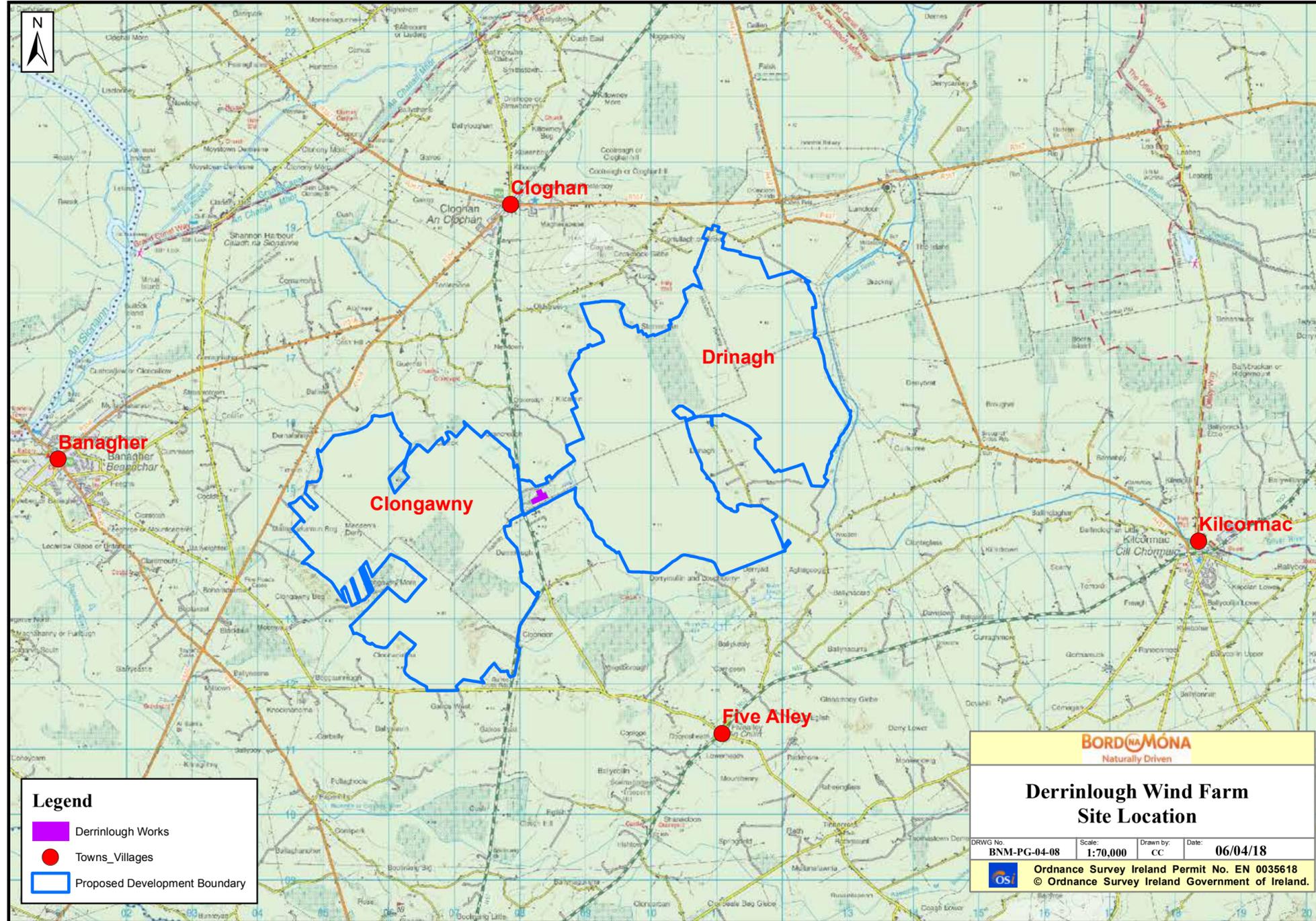
In line with ongoing company strategy, Bord na Móna is now proposing to develop a wind farm on Clongawny and Drinagh bogs located in Co. Offaly to be known as Derrinlough Wind Farm. The proposed project will contribute to Ireland's renewable energy targets. It will also contribute to increasing the security of energy supply in Ireland by facilitating a higher level of energy generation self-sufficiency.

Bord na Móna has a strong record of siting, designing and delivering wind farms within its cutaway peatlands, such as Bellacorick, Bruckana and Mountlucas Wind Farms. The Company has demonstrated that large scale renewable energy projects such as wind farms are a suitable use of cutaway peatlands. Wind farms produce renewable electricity and assist in the offset of carbon emissions including those arising from other sectors, such as agriculture.

The purpose of this newsletter is to provide an outline of the proposed project, details on how we will engage with the local community and also details on upcoming community information events. Further newsletters will be produced as the project progresses.

Yours faithfully,

*Derrinlough Wind Farm  
Communications Team*



**Proposed Derrinlough Wind Farm**

The proposed development will be located on two bogs within the Boora Bog Group in West Offaly, namely Clongawny and Drinagh bogs.

The closest settlements to the site are Cloghan which is located approximately 2 km to the north and Five Alley which is located approximately 2.5 km to the south. Other settlements and towns in the surrounding area include Ferbane to the north, Birr to the south, Kilcormac to the east and Banagher to the west.

As the project is at an early stage the number and location of turbines has not been determined. However, it is estimated that the proposed wind farm will be similar in scale and height to other proposed Bord na Mona Wind Farms such as Cloncreen Wind Farm in east Offaly and Derryadd Wind Farm in Longford.

The proposed development will be designed with reference to the "Preferred Draft Approach Guidelines" which were announced in June 2017 by the Government which addressed six aspects: Noise Limits, Visual Amenity Setback, Shadow Flicker, Consultation Obligations, Grid Connection and Community Dividend.

**Indicative Project Timeline - Planning Phase**

**April - June 2018:**

- Baseline Environmental Surveys and Engineering Surveys

**June 2018 - March 2019:**

- Turbine Layout Design
- Site Investigation Works
- Civil and Electrical Engineering Design
- Completion of Baseline Surveys

**April - June 2019:**

- Preparation of Environmental Impact Assessment Report
- Completion of Planning Application Documents
- Submission of Planning Application to Consenting Authority

**June 2019:**

- Third Party Submission Period –Commencement of the Consenting Process

**June 2020:**

- Estimated Consenting/Planning Decision



Mountlucas windfarm

# Appendix B – Project Information Booklet

## April 2018

# Proposed Derrinlough Wind Farm



## Proposed Derrinlough Wind Farm

The proposed development will be located on two bogs within the Boora Bog Group in West Offaly, namely Clongawny and Drinagh bogs.

The closest settlements to the site are Cloghan which is located approximately 2 km to the north and Five Alley which is located approximately 2.5 km to the south. Other settlements and towns in the surrounding area include Ferbane to the north, Birr to the south, Kilcormac to the east and Banagher to the west.

As the project is at an early stage the number and location of turbines has not been determined. However, it is estimated that the proposed wind farm will be similar in scale and height to other proposed Bord na Móna Wind Farms such as Cloncreen Wind Farm in east Offaly and Derryadd Wind Farm in south Longford.

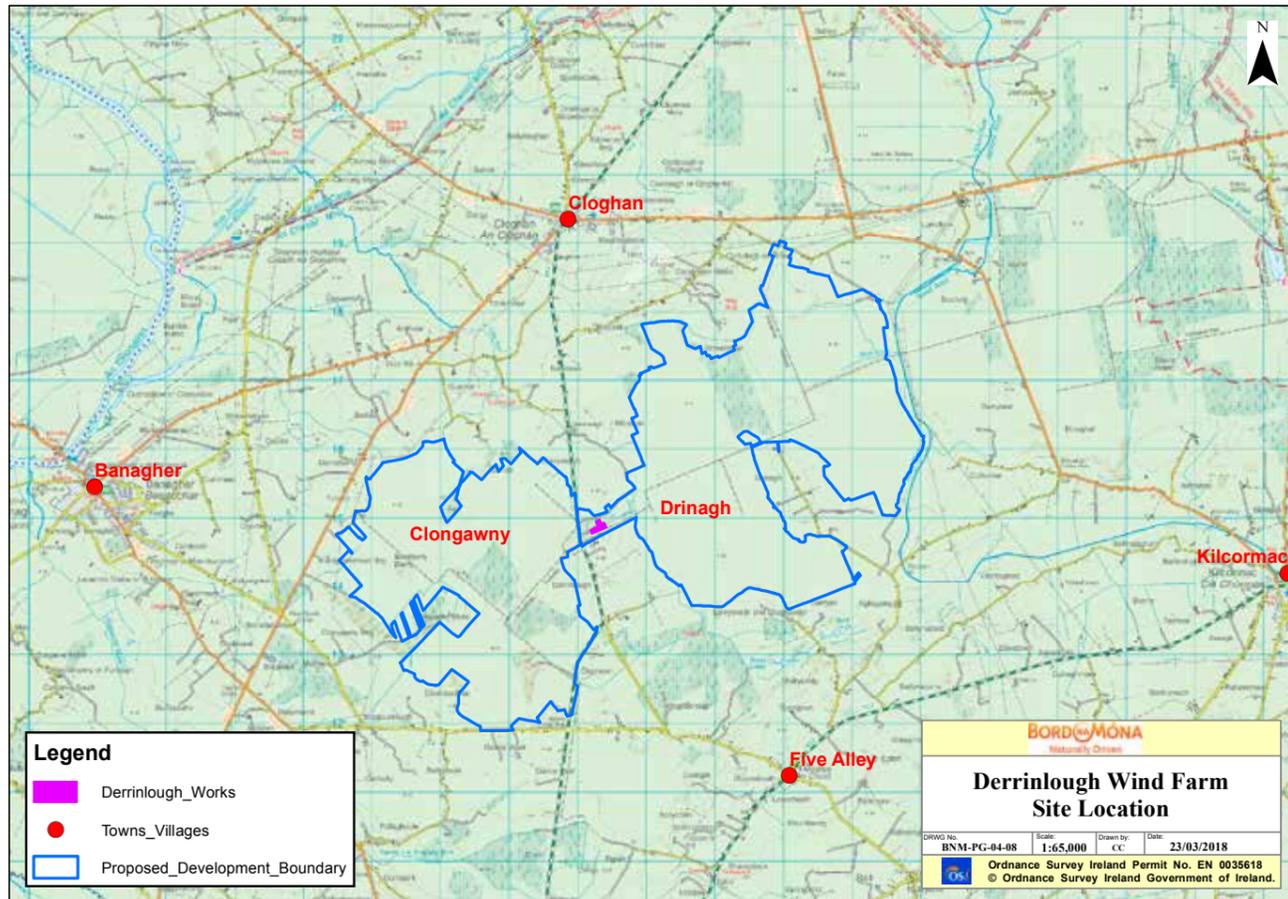


Figure 1 - Site Location Map

## Need for wind energy

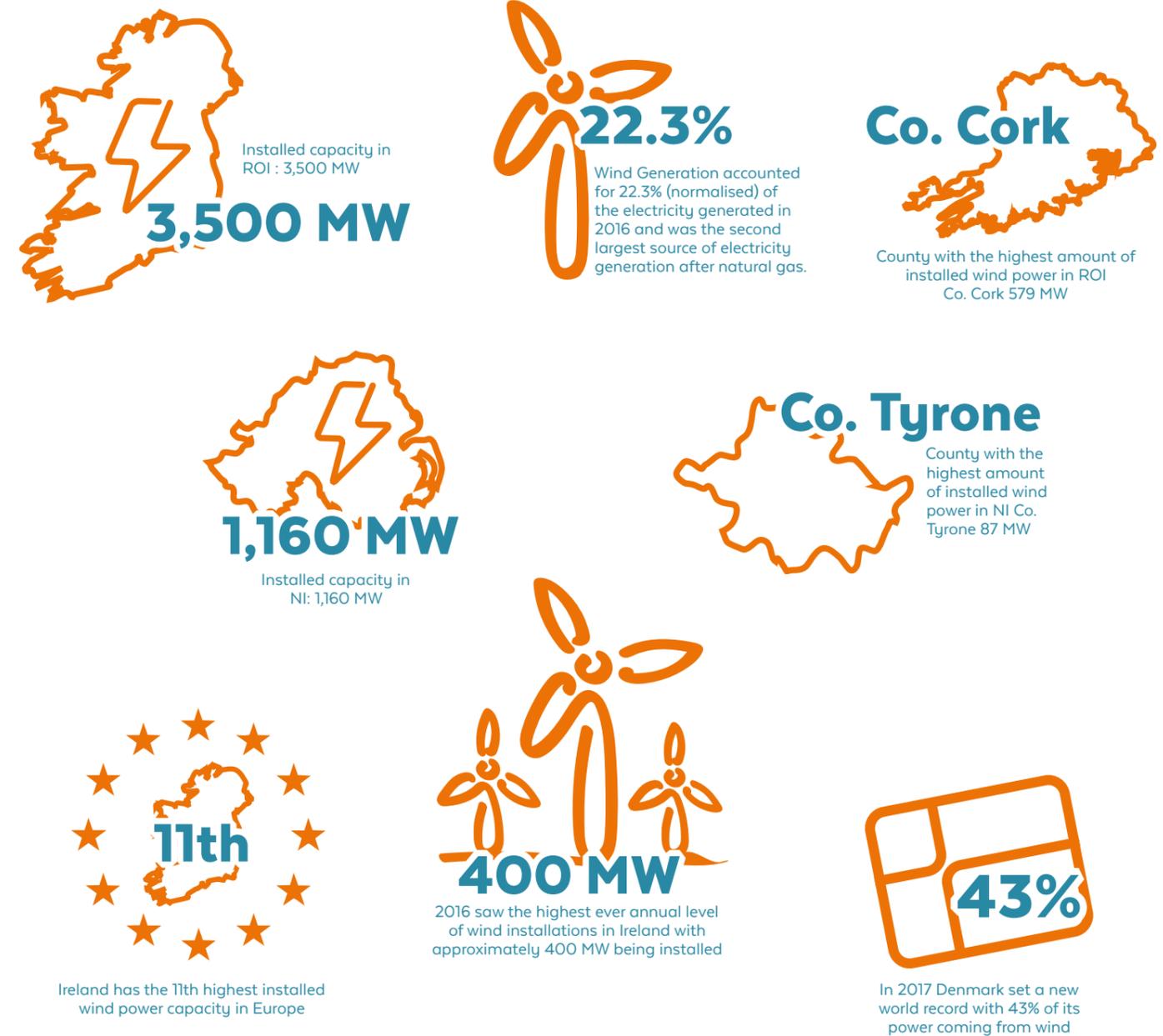
Government policy has set a target for 40% of the electricity consumed in 2020 to be generated from renewable resources, within an overall renewable energy target of 16%. It is acknowledged that wind energy will provide the main component of Ireland's renewable electricity at that time. Looking beyond 2020, Ireland will have to meet even more demanding climate change and renewable energy supply obligations in order to play its part in achieving the European climate and energy ambitions.

For the last eight decades Bord na Móna has underpinned Ireland's energy security by supplying peat from Irish bogs to power stations. By 2030 the company will cease harvesting energy peat but will use the land to continue to underpin Ireland's energy independence by using green sustainable energy sources. The company's goal is to be the largest producer of renewable electricity in Ireland.

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 energy supply in Ireland and will facilitate a higher level of energy generation self-sufficiency.

## Wind Stats - Did you know?



## Suitability of Bord na Móna Peatlands for Wind Farms

Bord na Móna has been harvesting sod turf and milled peat from its peatlands in the Midlands region since the 1950s. Many of these areas have now reached, or are reaching the cutaway stage and the company must plan a range of new, integrated, wise and beneficial uses for these peatlands in consultation with the local communities and other interested stakeholders.



The development of wind farms on these cutaway areas would continue the long tradition of energy production in a new increasingly sustainable form. Advantages offered by cutaway peatlands for the development of onshore wind farms, include:

- Significant scale, and are present in large blocks
- Industrial, brown-field sites, suitable for redevelopment
- Open, unenclosed landscapes with good wind characteristics
- Close proximity to the national grid and have good road access
- Linked by rail or road passageways, suitable for cable connections
- Uninhabited, with an absence of residential or commercial premises
- Generally flat and well drained, with minimal dangers of land slippage
- Proven delivery of this type of development, as demonstrated by Bruckana and Mountlucas Wind Farms.

## 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
- Environmental Sensitivity
- County Development Plans
- Telecommunications Links
- Cumulative Visual Impact
- Flooding Risk
- Supporting Infrastructure
- Aviation

## Preferred draft approach to Wind Energy Development in Ireland

A 'preferred draft approach' to the Review of the 2006 Wind Energy Development Guidelines was announced by the Government on 13 June 2017. The 'preferred draft approach' focuses on a number of key aspects including:

### 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.

### 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 and applicants/developers must offer a form of community benefit that provides for a tangible long-term dividend to the community.

# Strategic Infrastructure Development Planning Process Explained

For most large projects, a key issue 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

At this early stage of the project, Bord na Móna estimate that the output of the proposed Derrinlough Wind Farm will be in excess of 50MW. Consequently, 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.

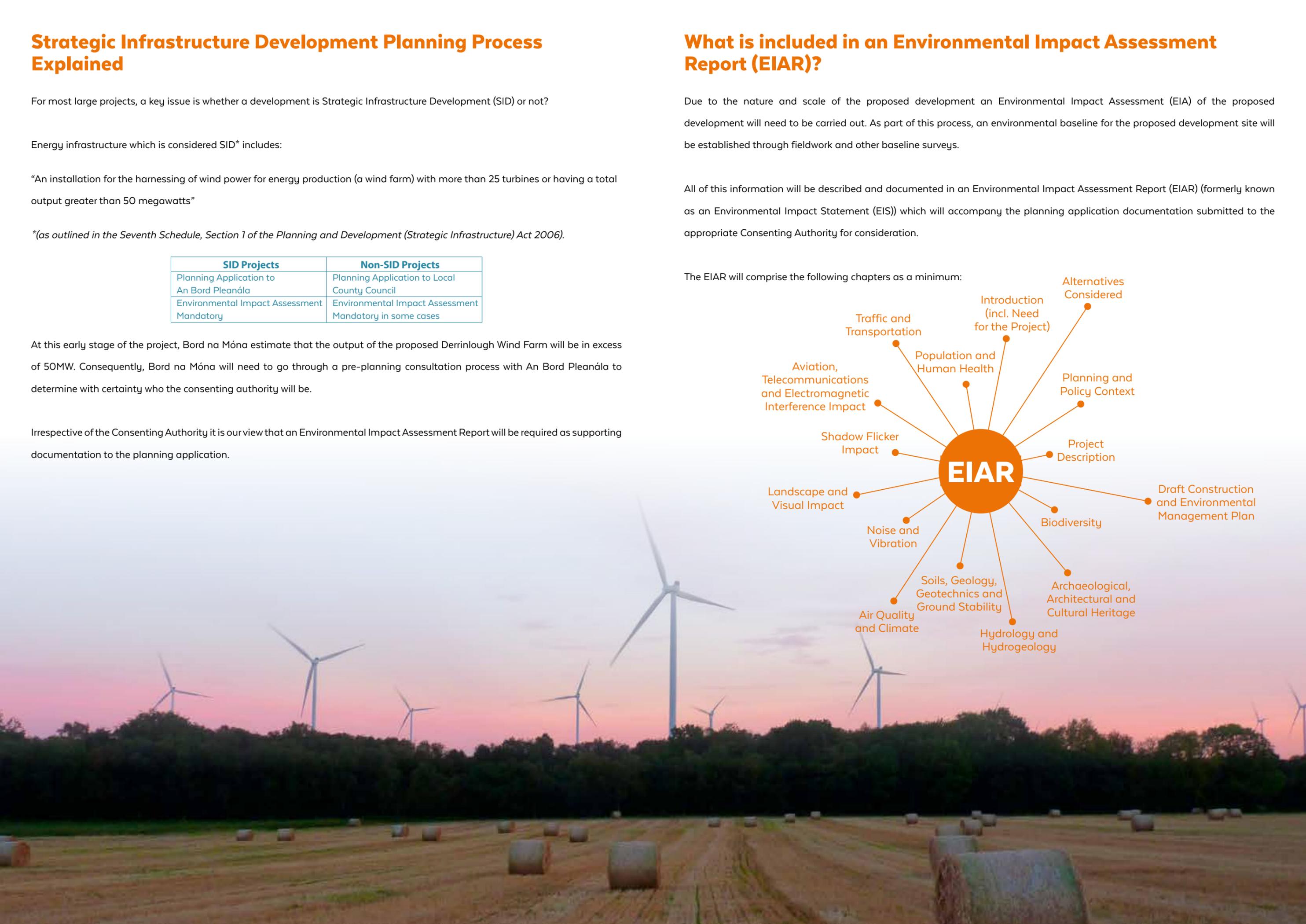
Irrespective of the Consenting Authority it is our view that an Environmental Impact Assessment Report will be required as supporting documentation to the planning application.

# 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:



## 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 Derrinlough 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.

The photomontages which will form part of the LVIA for Derrinlough Wind Farm will be displayed at the next round of Community Information Sessions.



## Local Benefits of the Development

Bord na Móna has a long history of working with local clubs and communities. In Mountlucas and Bruckana we have designed and are operating Community Gain Schemes in conjunction with the local communities. The combined fund amounts to €125,000 per annum and so far this has benefitted schools, sports clubs, general amenity, social initiatives and community facilities.

In developing the Derrinlough Wind Farm project, Bord na Móna wish to consult with the local communities regarding potential types of benefits including but not limited to:

- Community Gain Scheme
- Near Neighbour Scheme
- Community Ownership Scheme
- Amenity/Recreational Facilities.

Additional benefits arising from the construction and operation of the proposed Derrinlough Wind Farm project will be:

- 100 to 120 jobs at peak construction
- 6 - 8 long term, high quality technical jobs in operations and maintenance.
- Substantial rates paid to Offaly County Council.
- 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.
- Indirect employment created through the sub-supply of a wide range of products and services.



Mountlucas Community Gain Scheme Annual Awards

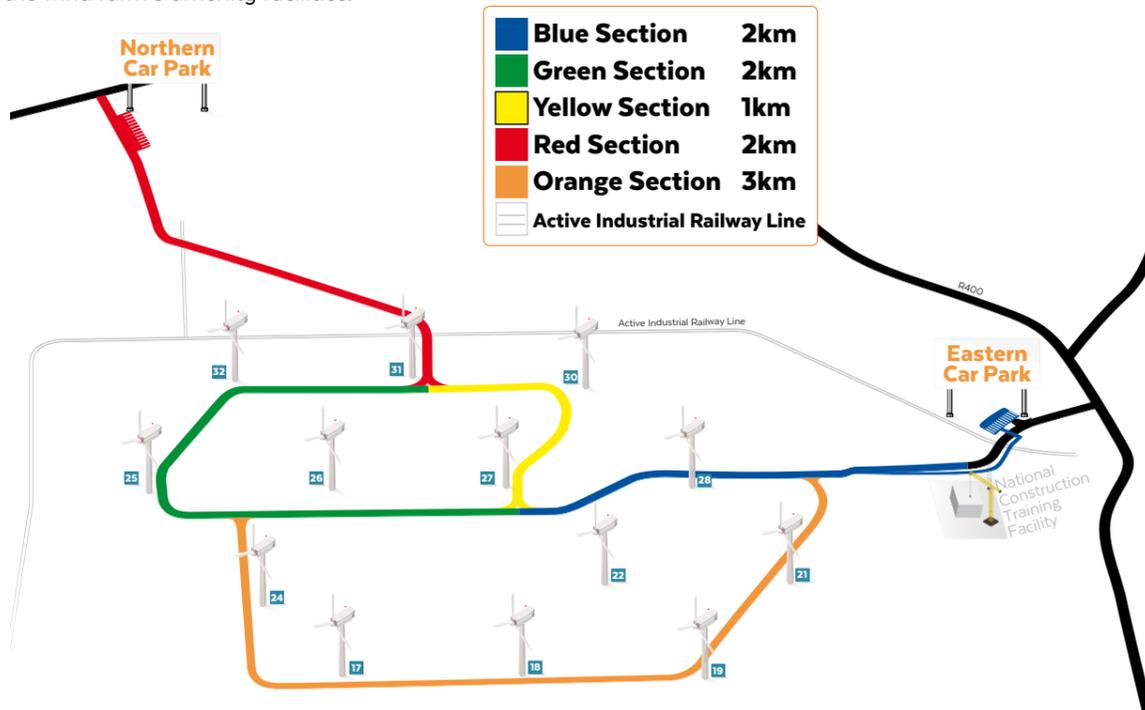


Molesworth Bridge Playground, Daingean which received community funding from Mountlucas Wind Farm Community Gain Scheme.

# 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 at Derrinlough Wind Farm. Since 2016, over 60,000 visits have been made to the wind farm's amenity facilities.



Organised Tours Mountlucas Wind Farm also offers free guided tours of the site. In 2017 we welcomed over 4,500 people to the wind farm on pre-booked visits. The guided tour lasts approximately 2 hours and covers renewable energy, wind farm construction, biodiversity and archaeology. Facilities for the tour include: car and coach parking, 10 km walkway-cycleway and toilet facilities.

If your family, group, club or school would like to book a tour please contact Mountlucas Wind Farm on: 087-1175756 to arrange a visit.

# Wind Farm Development Timeline

How long does it take to develop a wind farm?

6 - 9 months

Site selection & feasibility studies

Up to 24 months

Preparation of planning application

Up to 24 months

Planning Consent

12 - 24 months

Pre-construction studies, procurement and financial close

18 - 24 months

Construction of wind farm (including commissioning)

Typically 6 to 8 years

## Example: Mountlucas Wind Farm Timeline

- 2008 - Site Identification and feasibility studies.
- 2009 - Planning application to Offaly Co. Council.
- 2011 - Planning Approval from An Bord Pleanála.
- 2013 - Commencement of onsite construction works.
- 2014 - Completion of ground works. Completion of the erection of all 28 turbines.
- 2015 - Official opening in March 2015.



## Derrinlough Wind Farm – Indicative Project Timeline – Planning Phase

<b>April – June 2018:</b>	Commencement of Public and Stakeholder Engagement;
	Baseline Environmental Surveys and Engineering Surveys
<b>June 2018 – March 2019:</b>	Turbine Layout Design
	Site Investigation Works
	Civil and Electrical Engineering Design
<b>April – June 2019:</b>	Preparation of Environmental Impact Assessment Report (EIAR)
	Completion of Planning Application Documents
	Submission of Planning Application to Consenting Authority
<b>June 2019:</b>	Third Party Submission Period – Commencement of the Consenting Process
<b>June 2020:</b>	Estimated Consenting/Planning Decision

## Community Engagement

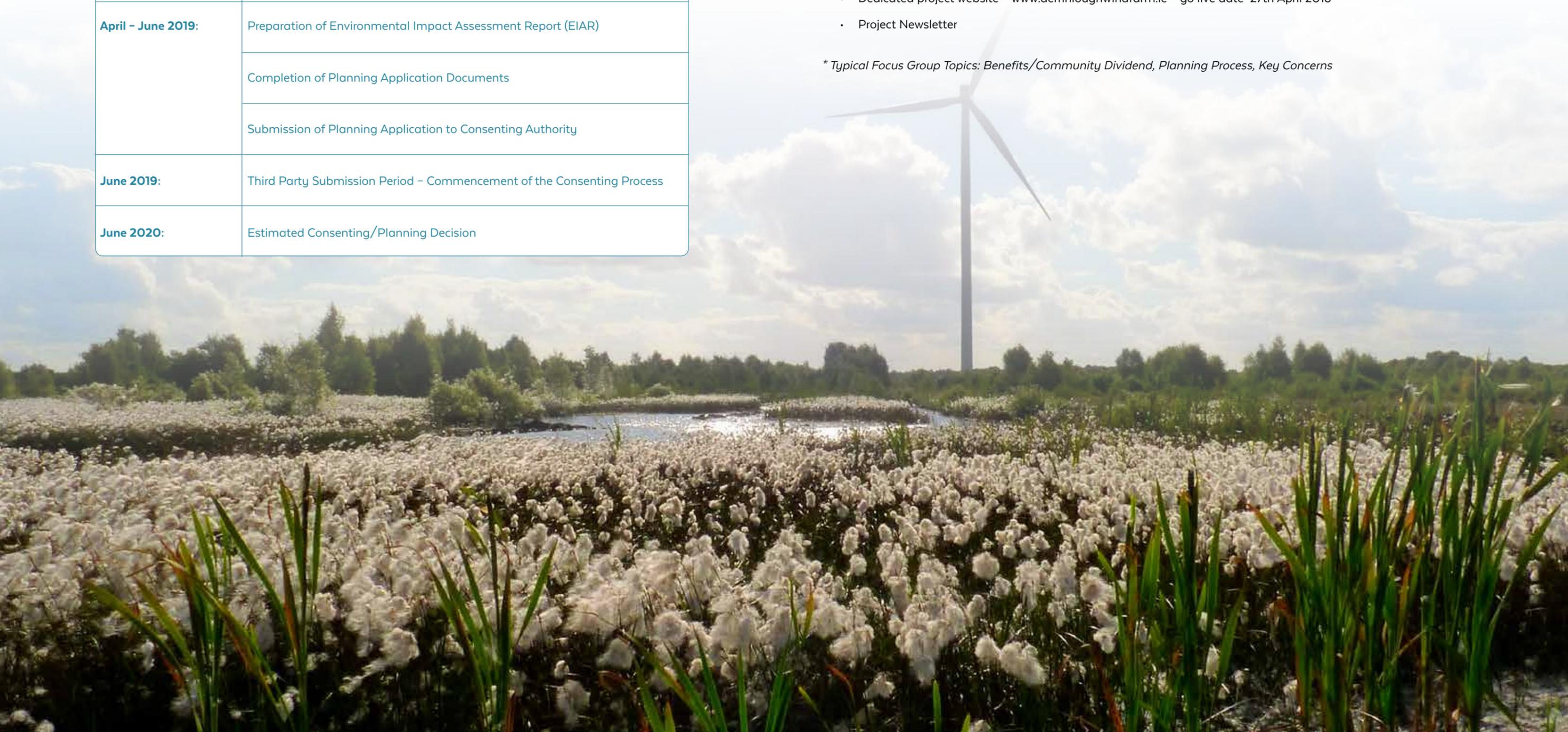
**1st Public Consultation:** April 2018 –initial consultation sessions.

**2nd Public Consultation:** October 2018 –pre-planning public consultation sessions.

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

- Door to door house calls in the vicinity of the proposed wind farm
- Community Liaison Officer
- Project Clinic (by appointment)
- Organised visits to Mountlucas Wind Farm
- Focus Groups independently facilitated\*
- Dedicated project website – [www.derrinloughwindfarm.ie](http://www.derrinloughwindfarm.ie) – go live date 27th April 2018
- Project Newsletter

\* Typical Focus Group Topics: Benefits/Community Dividend, Planning Process, Key Concerns



## About Bord na Móna

Established in 1934 as the Turf Development Board, renamed Bord na Móna in 1946, the Company committed itself over 80 years ago to delivering sustainable industry to Ireland using indigenous resources. Moving to environmentally friendly renewable energy sources is imperative and the Company intends to lead that change with the transition to peat free electricity generation by 2030. The Company sees this as an opportunity to provide energy security for the future. By repositioning and restructuring, it will ensure the future success and sustainability of their business for the benefit of all their key stakeholders – customers, suppliers, employees, communities and the State.

Transformation will be driven by new uses of Bord na Móna's landbank. Its focus is on developing businesses with an understanding of the need to work in harmony with the natural environment and guided by their sustainability principles – economic, social and environmental. Bord na Móna is committed to innovation, sustainable growth and providing energy security for decades to come.

## Further Information (contact details)

The Derrinlough Wind Farm project will benefit from participation by residents and communities during each stage of the development. If you wish to be updated or require further information about the proposed development please contact:

Derrinlough Wind Farm Communications Team

Address: Bord na Móna Powergen

Main Street

Newbridge

Co. Kildare

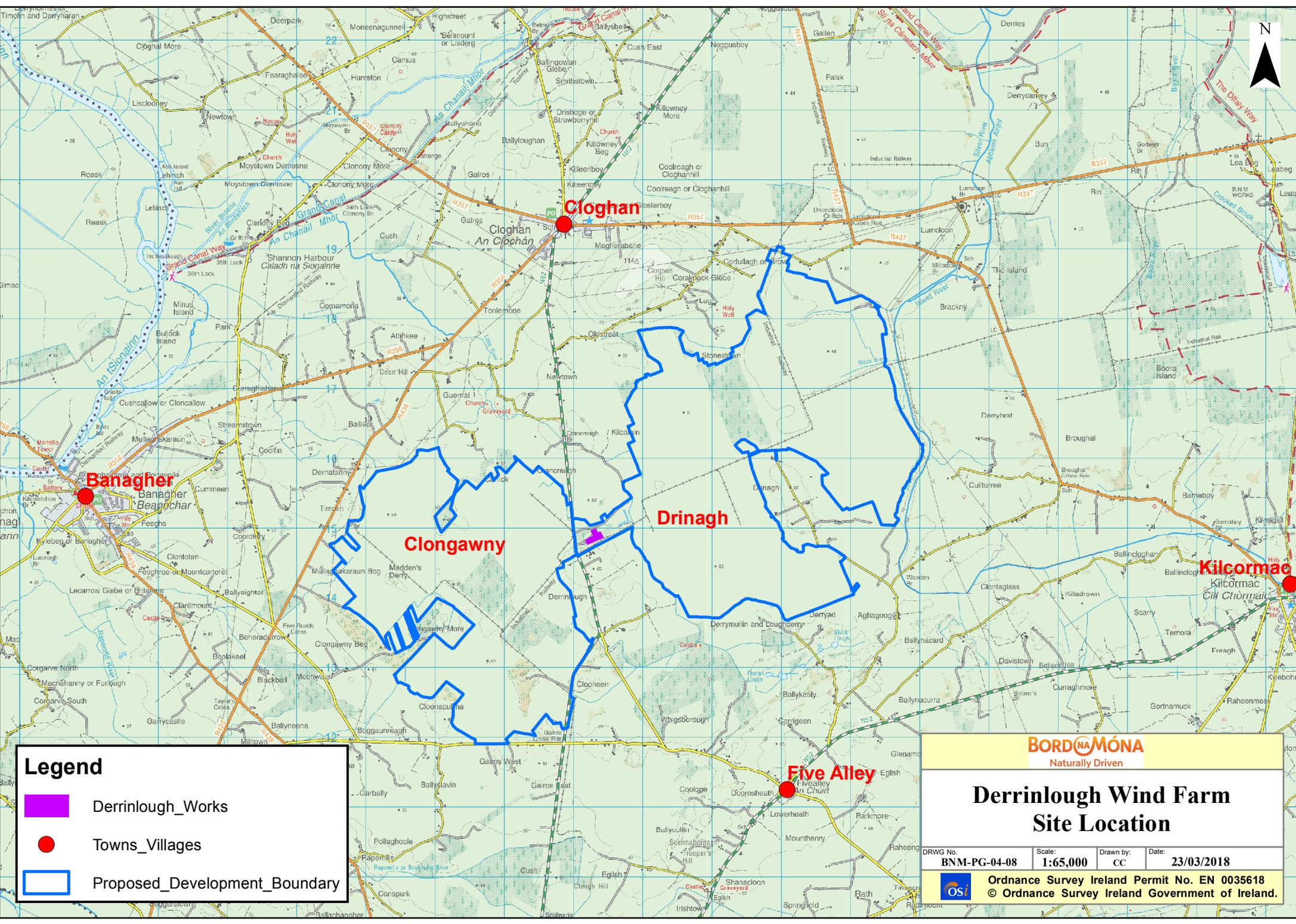
Tel: 045-439800

E-mail: [derrinloughwindfarm@bnm.ie](mailto:derrinloughwindfarm@bnm.ie)

[www.derrinloughwindfarm.ie](http://www.derrinloughwindfarm.ie)







**Legend**

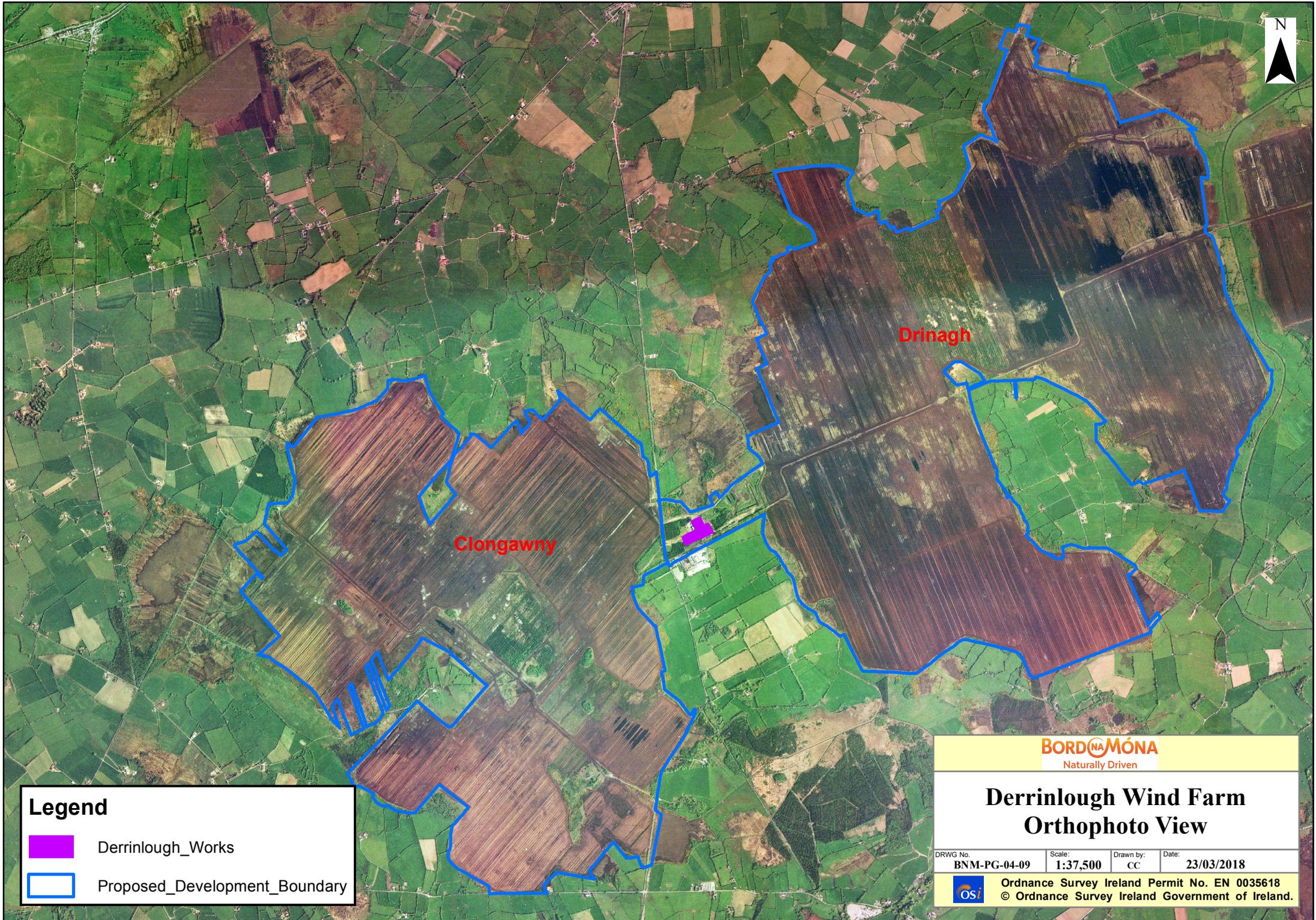
-  Derrinlough\_Works
-  Towns\_Villages
-  Proposed\_Development\_Boundary

**BORD NA MÓNA**  
Naturally Driven

**Derrinlough Wind Farm  
Site Location**

DRWG No.	Scale:	Drawn by:	Date:
BNM-PG-04-08	1:65,000	CC	23/03/2018

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**Legend**

-  Derrinlough\_Works
-  Proposed\_Development\_Boundary

**BORD NA MÓNA**  
Naturally Driven

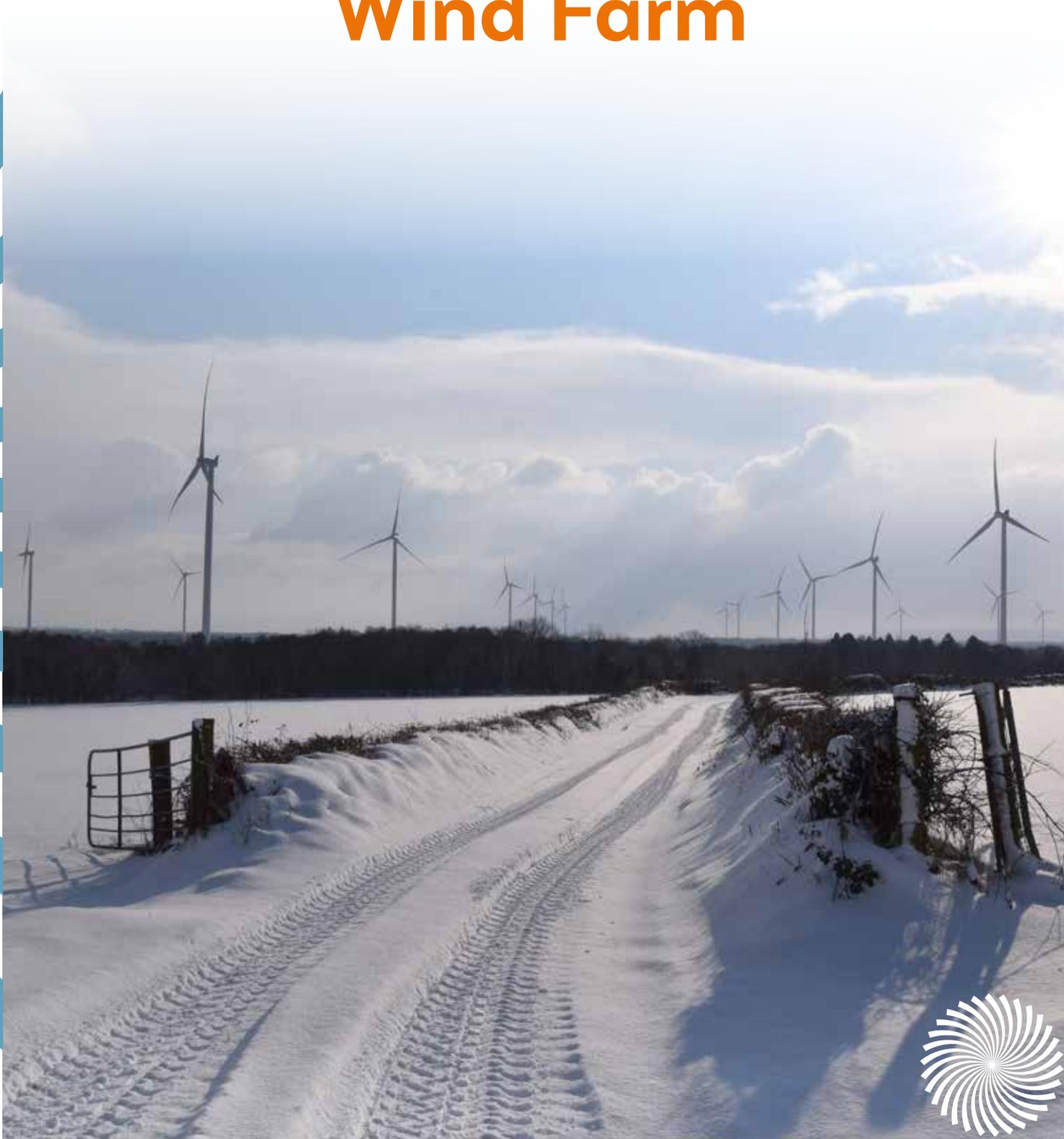
**Derrinlough Wind Farm  
Orthophoto View**

DRWG No. BNM-PG-04-09	Scale: 1:37,500	Drawn by: CC	Date: 23/03/2018
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# Appendix C – Project Information Booklet November 2018

# Proposed Derrinlough Wind Farm



## Introduction

Bord na Móna plc is a 95% state-owned company, originally established in 1934 to develop on an industrial scale and manage on a commercial basis some of Ireland's extensive peat resources, in accordance with Government policy at the time. Bord na Móna's lands extend to approximately 80,000 hectares in total and are located mainly in the Irish midlands. In 2011, Bord na Móna published a 'Strategic Framework for the Future Use of Peatlands', which reviews and assesses the land bank resource, identifies key issues and considers options for future land-use. The Strategy recognises that cutaway peatlands have significant potential for the development of wind energy as an integrated after-use.

## The Proposed Location

Bord na Móna has selected two of its existing bogs in Co. Offaly for the proposed development of a wind farm in the area. The proposed site for the wind farm is shown in Figure 1 below.

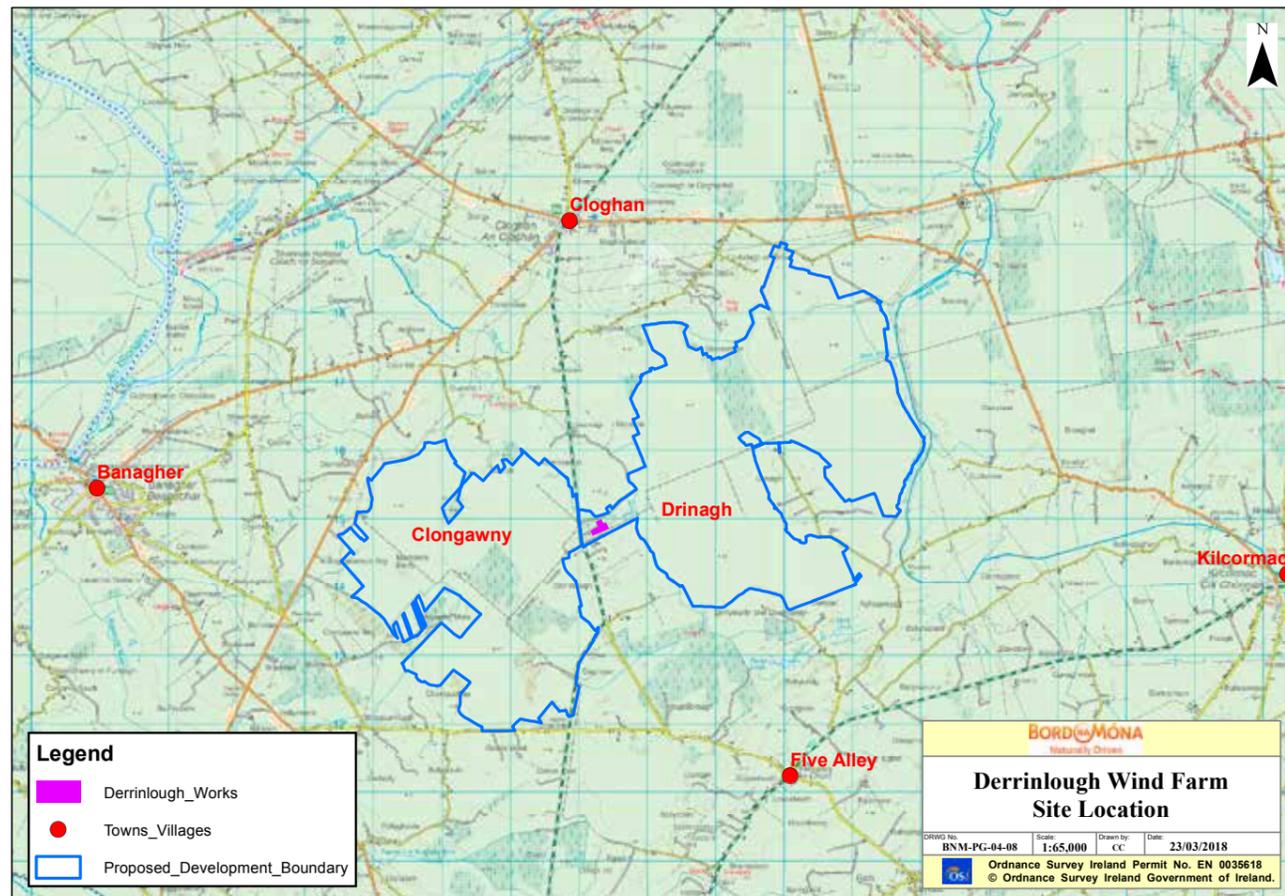


Figure 1 – Site Location Map

The proposed Derrinlough Wind Farm will be developed on cutaway peatlands on Clongawny and Drinagh bogs which are located within the Boora Bog Group in West Offaly. The two bog areas are generally adjacent to the communities of Cloghan and Five Alley and comprise the townlands of:

Balliver, Carrick (Garrycastle by), Clongawny More, Cloonacullina, Clooneen, Coolreagh or Cloghanhill Cortullagh or Grove, Crancreagh, Dernafanny, Derrinlough, Derryad (Eglis By), Derrymullin and Loughderry, Drinagh, Galros East, Galros West, Guernal, Kilcamin, Lumcloon, Mullaghakaraun Bog, Stonestown and Timolin.

Other settlements and towns in the surrounding area include Ferbane to the north, Birr to the south, Kilcormac to the east and Banagher to the west.

## Need for wind energy

Government policy has set a target for 40% of the electricity consumed in 2020 to be generated from renewable resources, within an overall renewable energy target of 16%. It is acknowledged that wind energy will provide the main component of Ireland's renewable electricity at that time. Looking beyond 2020, Ireland will have to meet even more demanding climate change and renewable energy supply obligations to play its part in achieving the European climate and energy ambitions.

For the last eight decades Bord na Móna has underpinned Ireland's energy security by supplying peat from Irish bogs to power stations. In October 2018, Bord na Móna launched its Brown to Green strategy that aligns the company with National and EU Decarbonisation policies. It aims to accelerate the development of renewable energy assets to support national climate and energy policy targets as well as accelerating investment in higher-value recycling and resource recovery business. The company's goal is to be the largest producer of renewable electricity in Ireland.

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 energy supply in Ireland and will facilitate a higher level of energy generation self-sufficiency.

## Suitability of Bord na Móna Peatlands for Wind Farms

Bord na Móna has been harvesting sod turf and milled peat from its peatlands in the Midlands region since the 1950s. Many of these areas have now reached, or are reaching the cutaway stage and the company must plan a range of new, integrated, wise and beneficial uses for these peatlands in consultation with the local communities and other interested stakeholders.

The development of wind farms on these cutaway areas would continue the long tradition of energy production in a new increasingly sustainable form. Advantages offered by cutaway peatlands for the development of onshore wind farms, include:

- Significant scale, and are present in large blocks
- Industrial, brown-field sites, suitable for redevelopment
- Open, unenclosed landscapes with good wind characteristics
- Proximity to the national grid and have good road access
- Linked by rail or road passageways, suitable for cable connections
- Generally flat and well drained, with minimal dangers of land slippage
- Proven delivery of this type of development, as demonstrated by Bruckana and Mountlucas Wind Farms.

# Preferred draft approach to Wind Energy Development in Ireland

A 'preferred draft approach' to the Review of the 2006 Wind Energy Development Guidelines was announced by the Government on 13 June 2017. The 'preferred draft approach' focuses on a number of key aspects including:

## 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 point of the curtilage of any 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.

## 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 and applicants/developers must offer a form of community benefit that provides for a tangible long-term dividend to the community.

# Site Layout Design

In designing a layout for the proposed Derrinlough Wind Farm there were a number of factors to be considered, some of which are listed below. The main criteria considered include:

### ■ Setback distance:

The turbine layout has been designed with a minimum setback distance of 750m to the nearest house from a turbine. This complies with the 'preferred draft approach' which proposes a setback distance of 4 times the tip height.

Distance	No. of Houses	Cumulative
750m	0	0
1,000m	39	39
1,250m	19	58
1,500m	24	82
1,700m	36	118
2,000m	54	172

### ■ Noise:

The layout has been designed to meet the draft wind energy Guidelines 40dB (A) noise limit value.

### ■ Cumulative Effects

There are three wind farm developments in the area which are relevant to the proposed development:

- Leabeg Wind Farm comprises two turbines and is operational since September 2015. It is located to the northeast of Drinagh bog.
- Meenwaun Wind Farm is located to the west of Clongawny bog and is operational since 2017.
- Cloghan Wind Farm is a nine-turbine project located south of Cloghan village, immediately northwest of Clongawny Bog. The project has received planning approval but is currently subject to a judicial review.

Each of these developments are being considered as part of the design of the proposed development and in the Environmental Impact Assessment process. All cumulative effects will be assessed and documented in the Environmental Impact Assessment Report (EIAR).

### ■ Grid Access::

There are two potential options for grid connection which are demonstrated by the two potential substation location options on the layout map. Both options will be assessed as part of the EIAR for the proposed development. However, only one substation and associated grid connection will be constructed.



## Proposed Development

The environmental assessment work at the site has shown that it can accommodate approximately 112 Megawatts (MW) of installed generating capacity. When operational, the wind farm will generate enough electricity to supply the needs of over 65,000 homes. It is intended to submit the planning permission application directly to An Bord Pleanála, under the provisions of the Planning and Development (Strategic Infrastructure) Act 2006 (please refer to the next page for more detailed information on this process). An initial approach is therefore being made to An Bord Pleanála seeking a determination in relation to the SID status, or otherwise, of the proposed wind farm development.

- **Number of Turbines**

The project will essentially comprise of 28 wind turbines. Apart from the turbines themselves, the other principal components of the wind farm are the foundations to support the turbine towers, access, crane hard-standings, underground cables between the turbines, an on-site electricity substation and an electrical connection to the appropriate node on the National Grid.

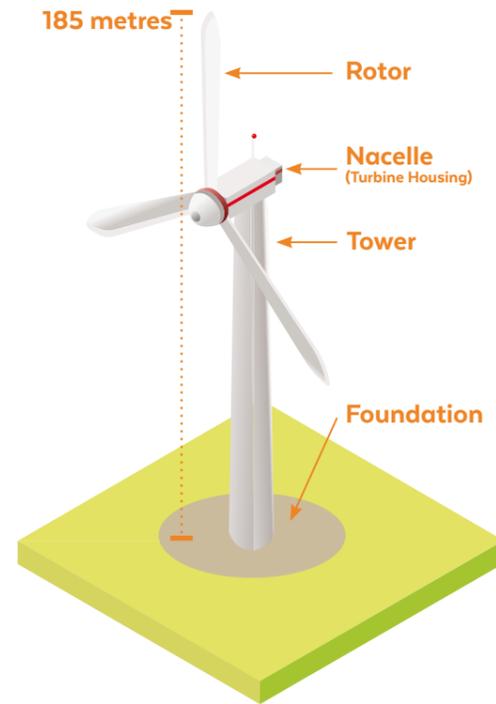
- **Height of Turbines**

The proposed turbines will have a ground to blade tip height of up to 185 metres. Within this size envelope, various configurations of hub height and rotor diameter may be used. The exact make and model of the turbine will be dictated by a competitive tender process, post planning and it will not exceed the maximum tip height of 185 metres.

- **Setback distance**

The minimum setback distance to the nearest house is 750m.

Only approximately 4% of the area of the site will be used for turbine bases, crane hard-standings and access tracks, so the vast majority of the site will not be required by the development. Once complete, apart from access roads, normal pre-wind farm activity can resume right up to the turbine bases.



## Strategic Infrastructure Planning Process Explained

For most large projects, a key issue 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”*

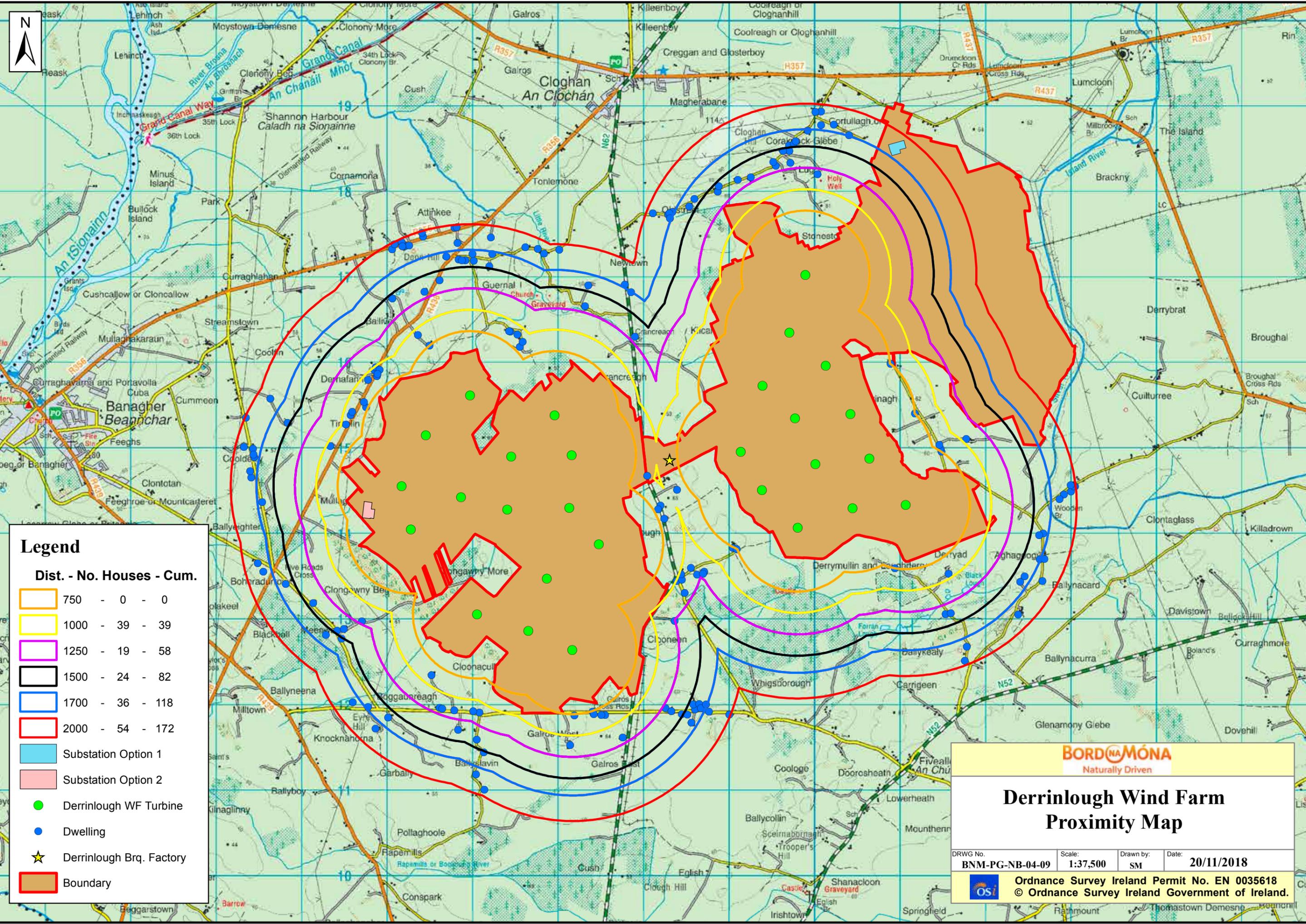
*\*(as outlined in the Seventh Schedule, Section 1 of the Planning and Development (Strategic Infrastructure) Act 2006).*

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

At this stage of the project, Bord na Móna estimate that the output of the proposed Derrinlough Wind Farm will be approximately 112MW. Comparison of the proposed installed capacity with the SID threshold suggests that the proposed development constitutes Strategic Infrastructure Development and therefore a planning application, including an EIA Report would be lodged to An Bord Pleanála.

While this is our view, 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.





**Legend**

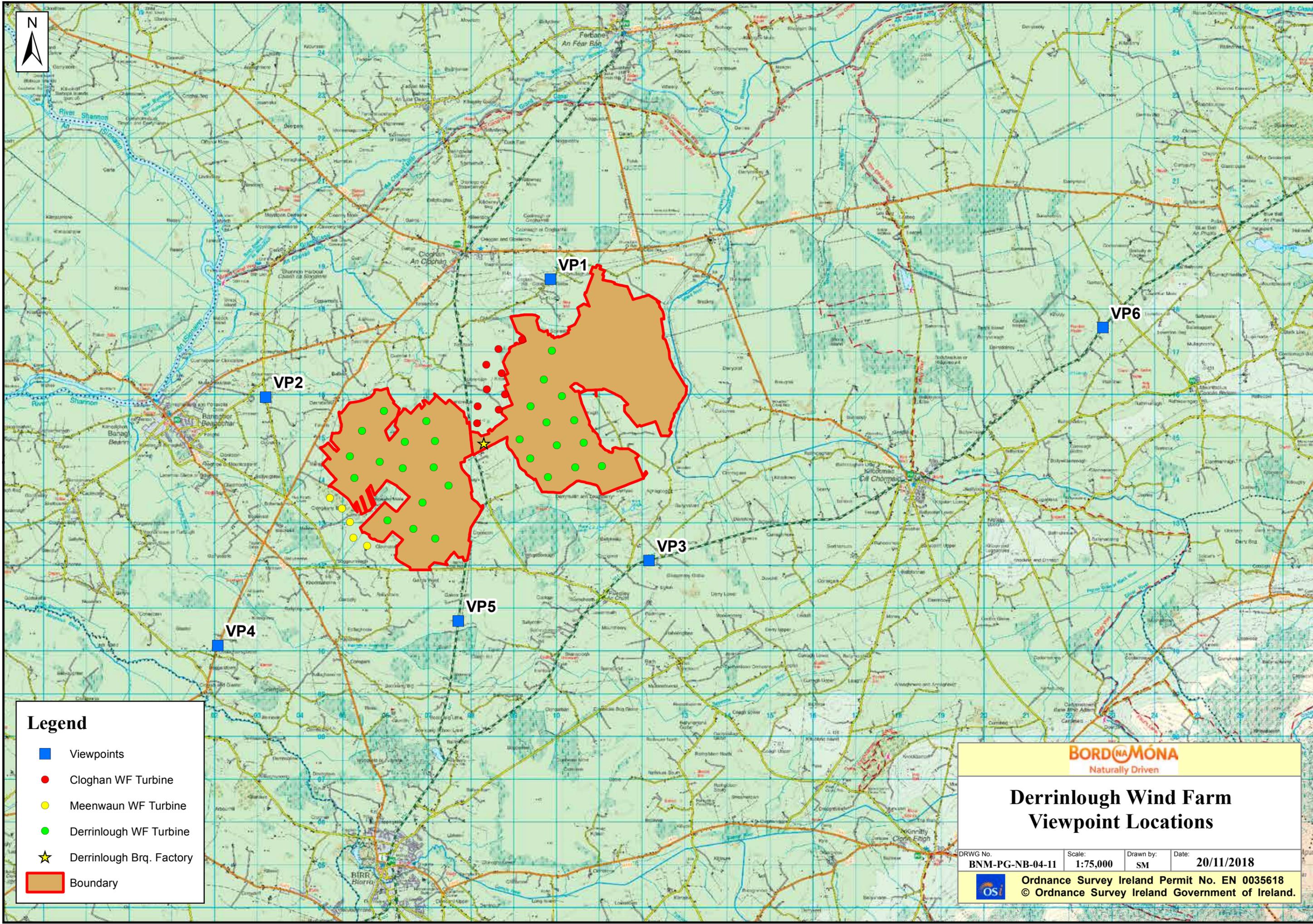
Dist. - No. Houses - Cum.			
	750	- 0	- 0
	1000	- 39	- 39
	1250	- 19	- 58
	1500	- 24	- 82
	1700	- 36	- 118
	2000	- 54	- 172
	Substation Option 1		
	Substation Option 2		
	Derrinlough WF Turbine		
	Dwelling		
	Derrinlough Brq. Factory		
	Boundary		

**BORD na MÓNA**  
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## Derrinlough Wind Farm Proximity Map

DRWG No. <b>BNM-PG-NB-04-09</b>	Scale: <b>1:37,500</b>	Drawn by: <b>SM</b>	Date: <b>20/11/2018</b>
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### Legend

- Viewpoints
- Cloghan WF Turbine
- Meenwaun WF Turbine
- Derrinlough WF Turbine
- ★ Derrinlough Brq. Factory
- Boundary

**BORD na MÓNA**  
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## Derrinlough Wind Farm Viewpoint Locations

DRWG No.	Scale:	Drawn by:	Date:
BNM-PG-NB-04-11	1:75,000	SM	20/11/2018



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# 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 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:



# 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 have been created as part of the Landscape and Visual Impact Assessment (LVIA) for the proposed Derrinlough Wind Farm. The photomontages taken from the locations marked on the map below, can be viewed on the following two pages:



Viewpoint 1: View from local road (L7009) adjacent to Coracknock Glebe, Stonestown - approximately 1.5km north of the proposed development

Legend

PRELIMINARY TURBINE LAYOUT	Blue
PROPOSED STONESTOWN windfarm	Green
PERMITTED LEABEG	Purple
PERMITTED MEENWAUN Windfarm	Pink



Viewpoint 2: View from local road (L3010) adjacent to Streamstown - approximately 2.5km northwest of the proposed development



Viewpoint 3: View from the National Road (N52) northeast of Five Alley - approximately 2.5km south of the proposed development



Viewpoint 4: View from the Regional Road (R438) adjacent to Coolaghansglaster - approximately 5km southwest of the proposed development



Viewpoint 5: View from the National Road (N62) adjacent to Galros East - approximately 2km south of the proposed development



Viewpoint 6: View from the National Road (N52) adjacent to Idle Corner, Killooly - approximately 12.5km east of the proposed development

## How Wind Turbines Operate

Generating electricity from wind is a well-established technology. A wind turbine captures the energy inherent in the wind through the propeller-like blades that are attached to the rotor. 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 (sometimes through a gearbox) which drives a generator located inside a protective container known as a nacelle, 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. An image of a typical wind turbine is included on the page opposite which shows the main elements that comprise 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. A typical schematic of a wind turbine nacelle is shown in the figure opposite, 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.



## Parts of turbine explained

**Blade:** The wind pushes on the blades, causing them to spin. The spinning motion is carried onwards to the generator (sometimes through a gearbox) via a shaft.

**Gearbox:** Gears transform the slow rotation of the shaft into a fast rotation suitable for the generator. Note not all turbines have a gearbox. Some designs are direct drive turbines.

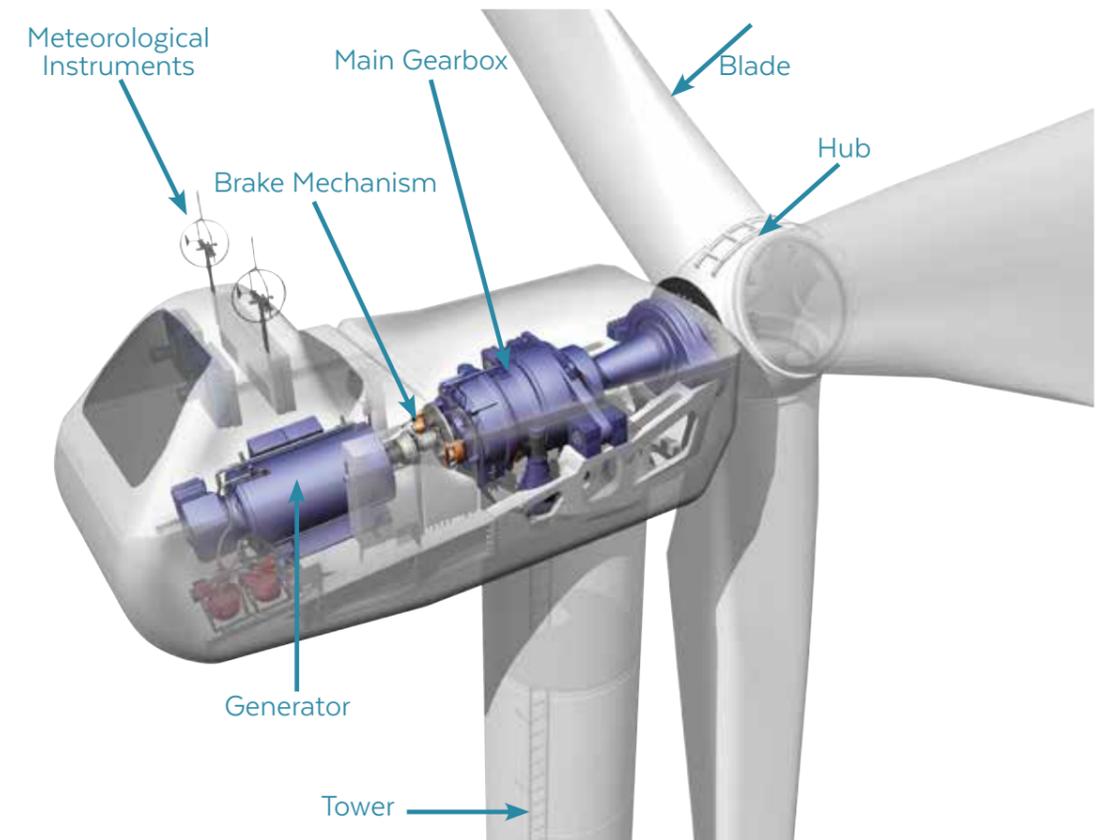
**Pitch control:** To spin at the optimal speed, the blades swivel to capture more or less of the wind energy depending on the wind speed

**Blade Shape:** The twisting shape of each blade is designed to capture energy from the wind wherever it hits the blade, from root to tip.

**Generator:** The arrangement of coils and magnets in a generator convert the spinning motion from the gearbox into electrical energy.

**Meteorological Instruments:** These send signals to motors in the tower to ensure the wind turbine always faces into the wind, whatever its direction and to the pitch controllers to angle the blades.

**Tower:** The tower holds the blade high above the ground where the wind is stronger.



## Benefits of the Development

The proposed Derrinlough Wind Farm will give rise to a range of benefits at a local level:



**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 contribute to the generation capacity required to meet Ireland's commitment to increasing its renewable energy sources in the post-2020 period and in particular the production of renewable electricity. During operation, the farm will obviate 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 and help to improve our energy security of supply.

## Potential Wind Farm Amenity Facilities

A wind farm consists primarily of access roads, turbines, hardstand areas and a substation and occupies a comparatively small footprint. This means that the rest of the land area can be utilised for other purposes.

Since the development of Bord na Móna's Mountlucas Wind Farm, amenity proposals have been incorporated into all Bord na Móna wind farm development projects. Similarly, it is intended that the planning application for the proposed Derrinlough Wind Farm development will include proposals for the inclusion of amenity facilities. Examples of such facilities include:

1. Creation of a network of public walkway/cycleways through the wind farm site that could be used as a basis for promoting local tourism.
2. Exploring potential for connection of these internal walkway/cycleways with external amenities in the local area e.g. Lough Boora Parklands, Grand Canal etc.
3. Enhancing habitats that add to the local and regional biodiversity, or provide refuges for rare species.
4. Assisting in the development of peat-forming communities that will actively capture and sequester carbon.
5. Providing a range of ecosystem services, such as wildlife and wilderness areas, bird watching and nature studies; water storage and flood abatement.

As part of the amenity design process we are seeking ideas from near neighbours, local communities and local community groups on what the design could entail. If you have a suggestion for an amenity idea please contact the project Community Liaison Officer, Stephen Gonoude on 087-3486624 or email: [derrinloughwindfarm@bnm.ie](mailto:derrinloughwindfarm@bnm.ie).



## Derrinlough Wind Farm – Indicative Project Timeline – Planning Phase

<b>June 2018 – March 2019:</b>	Turbine Layout Design
	Site Investigation Works
	Civil and Electrical Engineering Design
<b>April – July 2019:</b>	Preparation of Environmental Impact Assessment Report (EIAR)
	Completion of Planning Application Documents
	Submission of Planning Application to Consenting Authority

## Further Information (contact details)

The Derrinlough Wind Farm project will benefit from participation by residents and communities during each stage of the development. If you wish to be updated or require further information about the proposed development please contact our Community Liaison Officer on:

Tel: 087-3486624  
E-mail: [derrinloughwindfarm@bnm.ie](mailto:derrinloughwindfarm@bnm.ie)  
Address: Bord na Móna Powergen  
Main Street  
Newbridge  
Co. Kildare

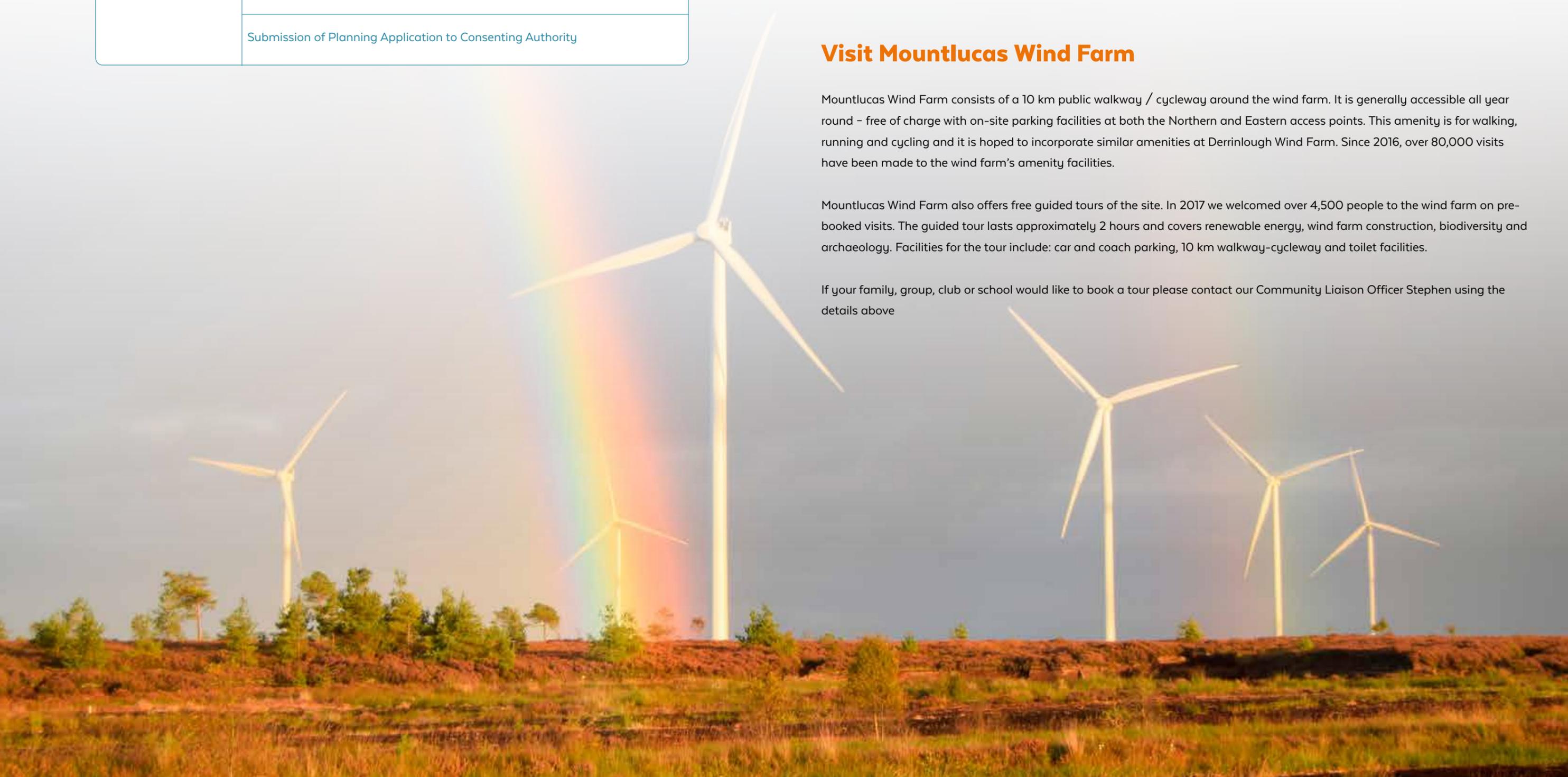
[www.derrinloughwindfarm.ie](http://www.derrinloughwindfarm.ie)

## Visit Mountlucas Wind Farm

Mountlucas Wind Farm consists of a 10 km public walkway / cycleway around the wind farm. It is generally accessible all year round – free of charge with on-site 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 at Derrinlough Wind Farm. Since 2016, over 80,000 visits have been made to the wind farm’s amenity facilities.

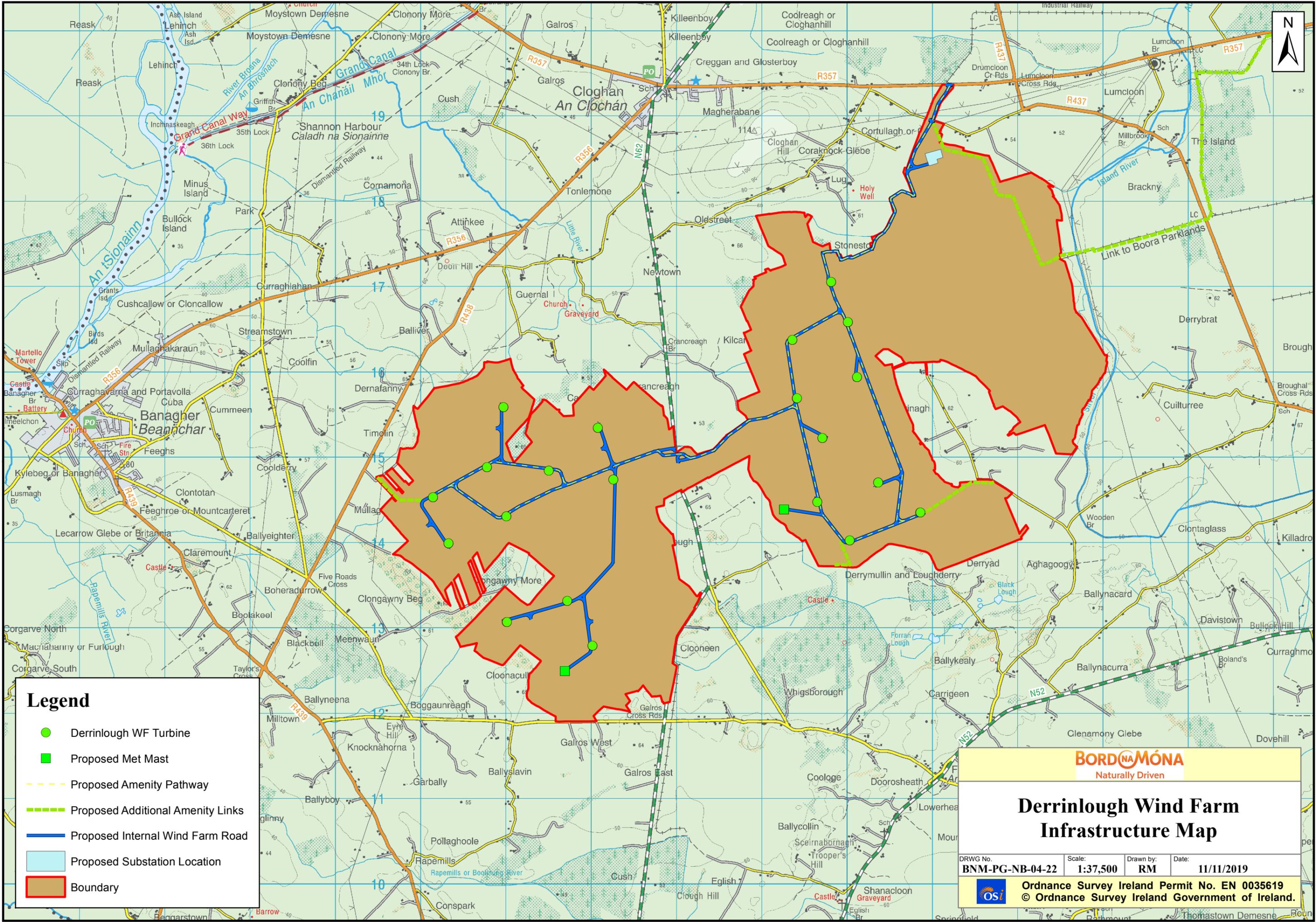
Mountlucas Wind Farm also offers free guided tours of the site. In 2017 we welcomed over 4,500 people to the wind farm on pre-booked visits. The guided tour lasts approximately 2 hours and covers renewable energy, wind farm construction, biodiversity and archaeology. Facilities for the tour include: car and coach parking, 10 km walkway-cycleway and toilet facilities.

If your family, group, club or school would like to book a tour please contact our Community Liaison Officer Stephen using the details above





# Appendix D – Project Infrastructure and Proximity Maps November 2019



**Legend**

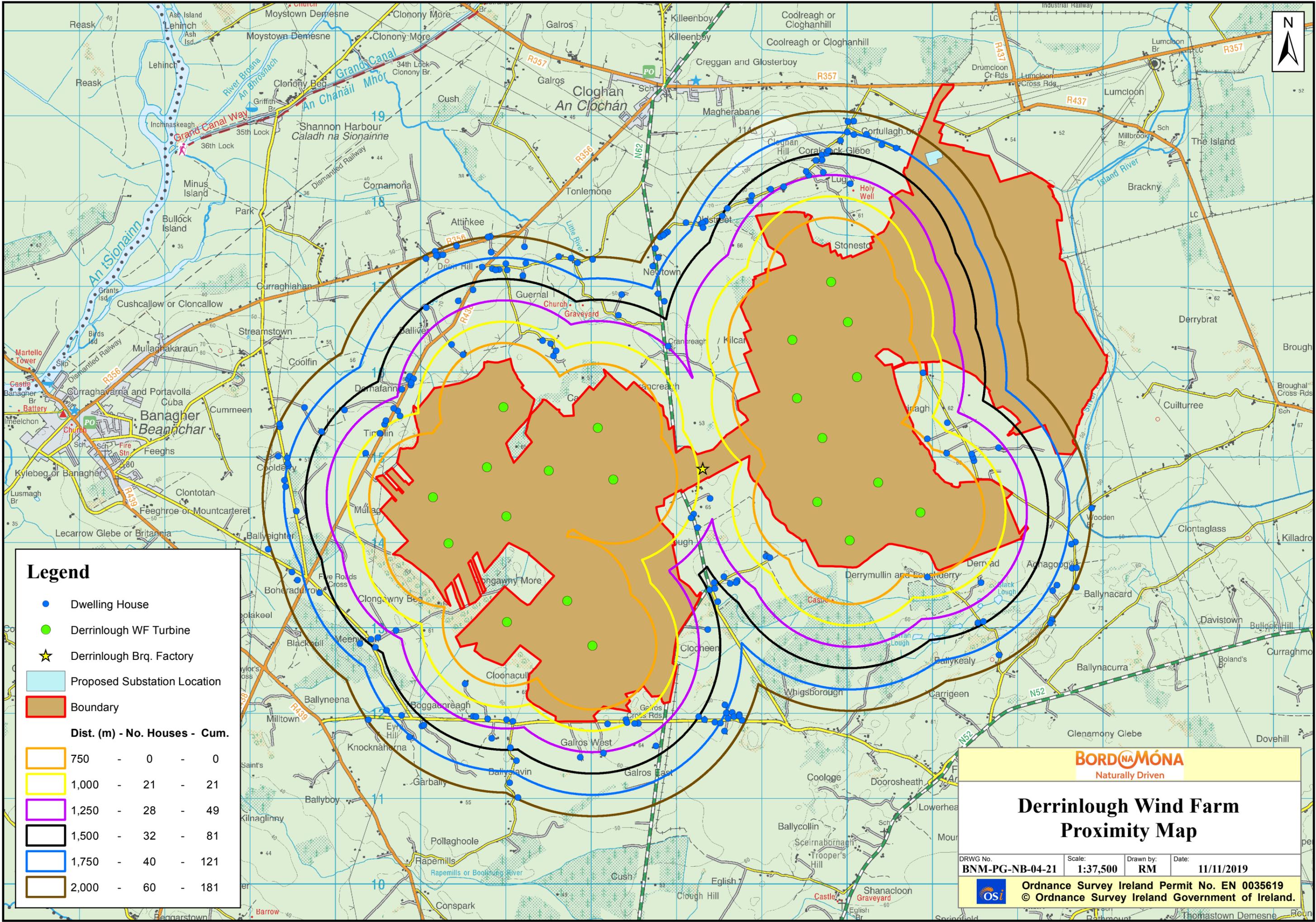
- Derrinlough WF Turbine
- Proposed Met Mast
- - - Proposed Amenity Pathway
- - - Proposed Additional Amenity Links
- Proposed Internal Wind Farm Road
- Proposed Substation Location
- Boundary

**BORD NA MÓNA**  
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### Derrinlough Wind Farm Infrastructure Map

DRWG No. <b>BNM-PG-NB-04-22</b>	Scale: <b>1:37,500</b>	Drawn by: <b>RM</b>	Date: <b>11/11/2019</b>
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### Legend

- Dwelling House
- Derrinlough WF Turbine
- ★ Derrinlough Brq. Factory
- Proposed Substation Location
- Boundary

#### Dist. (m) - No. Houses - Cum.

	750	-	0	-	0
	1,000	-	21	-	21
	1,250	-	28	-	49
	1,500	-	32	-	81
	1,750	-	40	-	121
	2,000	-	60	-	181

**BORD NA MÓNA**  
Naturally Driven

## Derrinlough Wind Farm Proximity Map

DRWG No. <b>BNM-PG-NB-04-21</b>	Scale: <b>1:37,500</b>	Drawn by: <b>RM</b>	Date: <b>11/11/2019</b>
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