



Lissinagroagh

Wind Farm

Project Brochure

March 2026





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Introduction

The proposed Lissinagroagh Wind Farm is located north of Manorhamilton in Co. Leitrim.

FuturEnergy Ireland is a leading Irish wind developer established in 2021 as a stand-alone joint venture between Coillte and the ESB. The company was formed with an aim to maximise the potential of Ireland’s unique wind and land resources and accelerate Ireland’s transformation to a low carbon energy economy.

FuturEnergy Ireland is targeting the delivery of 1GW of renewable energy by 2030 through the development of responsible, carefully considered onshore wind projects. This would power an estimated 730,000 homes annually and make a significant contribution to Ireland’s commitment to produce 80% of electricity from renewable sources by the end of this decade.

There are 21 active wind energy projects across the country in the FuturEnergy Ireland portfolio, including Lissinagroagh Wind Farm.



The Project Team

The team directly involved in the proposed Lissinagroagh Wind Farm includes Kieran O’Malley, Lead Project Manager; Andrea Cornejo, Project Developer; Shane Lowry, Community Engagement Manager; and two Community Liaison Officers (CLOs), Tom Costello and Eamonn Keavney, as well as several specialists in the areas of grid, wind resource, planning and policy.

TOBIN Consulting Engineers is leading a multidisciplinary team in carrying out studies, design and preparation of the planning application and Environmental Impact Assessment Report (EIAR) for Lissinagroagh Wind Farm on behalf of FuturEnergy Ireland. TOBIN has an experienced team of planners, environmental scientists, engineers and other in-house specialists who undertake an extensive range of projects.

TOBIN’s areas of expertise are underpinned by the principles of sustainability, reducing carbon footprint, managing resource use, protecting biodiversity and improving quality of life with a focus on stakeholder involvement from the outset.

As an innovative consultancy firm that covers all sectors of the energy and environmental market, TOBIN has significant experience and involvement in the development of national policy, regulation and standards and can advise clients on all stages of a project’s lifecycle from project management to operation.

This brochure has been prepared to:

- Describe the constraints-led design process, which explains how the wind farm layout has evolved.
- Present the turbine layout that will be submitted with the wind farm planning application.
- Share information about the grid connection route, which will be submitted under a separate planning application.
- Outline the many ways in which this project could bring positive benefit to the local area.
- Introduce the chapters of the Environmental Impact Assessment Report.
- Explain the planning system and how to engage with this process.
- Provide details of the next steps for this project.

This information is supplemented by an online Virtual Tour, which includes a full set of photomontages of the proposed project from different viewpoints and information from the Environmental Impact Assessment Report. This is available at www.lissinagroaghwindfarm.ie.

All information on the Lissinagroagh Wind Farm project to date, including a downloadable copy of this brochure, is also available at www.lissinagroaghwindfarm.ie.

The Context

The importance of energy security

In 2024, Ireland imported up to 79.8% of its primary energy at an estimated €1 million per hour, way above the EU average of 58%. Since the Russian invasion of Ukraine in February 2022, gas prices in Europe have been extremely volatile, which leaves Ireland vulnerable to international price increases. This reliance on expensive imported energy is having an unprecedented inflationary effect across our economy.

The good news is that in 2024, Irish wind energy saved us €748 million on gas, which would have been predominantly imported. EU and national energy policies are seeking to further increase this saving by rapidly ramping up renewable generation capacity.

FuturEnergy Ireland is supporting the Government and the people of Ireland by developing low-cost renewable energy projects to create a dependable, affordable, Irish-based energy source that supports the green economy and lowers energy bills.

Climate change: the scale and the urgency

Our planet is warming at a dangerous rate. According to the World Meteorological Organisation, 2025 was the third warmest year on record and the second warmest in Ireland. Greenhouse gases, ocean temperature, sea levels and glacier loss reached all-time highs. The report revealed that droughts, wildfires, floods and other extreme weather events caused food crises, economic upheaval, and impacted more than 87.8 million people.

We have seen close to home the devastating impacts of recent extreme weather events, including storms and flooding that have brought widespread chaos and disruption across the country.

According to the Environmental Protection Agency, Ireland will fall far short of meeting its climate targets. The country is predicted to achieve only a reduction of 23% in greenhouse gas emissions by 2030 compared with the national target of 51%.



The critical role of renewable energy

Urgent action is needed. A key pillar of this will be an increase in renewable energy to replace the oil and gas that we burn to produce electricity. Renewable energy generation is central to the Government's energy policy, which is targeting 80% of electricity from renewable sources by 2030. The Government is committed to rapid decarbonisation of the energy sector and its goal is to achieve net zero emissions by 2050.

Lissinagroagh Wind Farm is being proposed, in part, as a response to these challenges.

Why onshore wind?

As Ireland's largest and cheapest renewable electricity resource, wind energy accounted for 33% of all electricity generated in Ireland in 2025. In total, wind energy produced 13,634 gigawatt hours (GWh) of electricity last year, which is equivalent to the electricity consumption of nearly three million Irish families.

Onshore wind energy is a clean fuel source. Unlike power plants that burn fossil fuels, wind turbines do not produce atmospheric emissions that cause greenhouse gases.

Wind is a free, inexhaustible domestic natural resource, available in abundance in Ireland. As an operating wind farm occupies a relatively small proportion of an overall site area, many other land uses can co-exist such as commercial forestry, farming, recreation and biodiversity management. In 2025, Ireland's onshore wind energy capacity surpassed 5 GW.

The Climate Action Plan (2025) aims to increase onshore wind energy capacity to 9 GW by 2030. Other renewable energy technologies such as offshore wind and solar are also required to meet national renewable energy targets. The Climate Action Plan calls for 8 GW of grid-scale solar and at least 5 GW of offshore renewable energy by 2030.

View from L 6204 at Tullyshehery, Co. Leitrim



Why this project?

The proposed Lissinagroagh Wind Farm is located in north Co. Leitrim.

The wind farm study area extends to approximately 911 hectares, of which a significant proportion is an operational commercial forest owned by Coillte. The remaining land is third-party property.

The suitability of the site can be attributed, in part, to the following characteristics:

- There are good annual average wind speeds in the area.
- Setback distances from houses can align with the latest government draft guidance.
- There is a network of existing forestry roads within the site that can be upgraded and used for the wind farm.
- The majority of the site's land use can continue and co-exist with an operational wind farm.
- The site is largely covered in commercial conifer forestry.
- There are no NATURA 2000 sites, i.e. Special Areas of Conservation (SACs) or Special Protection Areas (SPAs), within the study area

Community Engagement

From the outset, the Lissinagroagh project team has placed a strong focus on open communication. Throughout our engagement programme, we have actively encouraged the community to contact the project's Community Liaison Officers (CLOs), Tom Costello and Eamonn Keavney, whose mobile numbers and email address are on all correspondence along with the project website details.

Engagement with the community started in April 2021 when the CLOs, Tom and Eamonn, delivered an introductory newsletter to houses within 2km of the study area. Over the following weeks, Tom and Eamonn called back to introduce themselves and start conversations with those closest to the site prior to any detailed design work commencing.

A dedicated project website, www.lissinagroaghwindfarm.ie, also went live. This website contains all project information, which has been kept updated, and provides access to the Virtual Tour.

During November and December 2021, our CLOs distributed Newsletter 2 and a list of FAQs to those within 2km of the project study area. This gave them further opportunity to answer questions raised by local residents and stakeholders. Any resulting meetings or conversations were held as per Covid-19 guidelines at that time.

As part of this messaging, our CLOs also delivered a letter introducing FuturEnergy Ireland when the company took over the Coillte renewable energy portfolio in November/December 2021.

Between January and March 2022 our CLOs called back to those who they had yet to meet. If people were not at home, an 'Invitation' letter with their contact details was placed in the post-box.

During February and March 2025, the CLOs delivered Newsletter 3. Over the following months, the CLOs called to homes within the local community. This gave them further opportunity to answer questions and to share information. Our CLOs also called back to those who they had not met during the delivery of Newsletter 3.

If people were not at home, an 'invitation to contact us' letter was delivered. On many occasions, the CLOs called again at different times and days to meet as many people as possible.

Four project updates letters were also distributed in November 2022, November 2023, June 2024 and October 2025 respectively. This gave our CLOs another opportunity to share information and answer questions.

CLOs Tom and Eamonn have made themselves available, and have had many meetings and discussions with local residents and other interested stakeholders.

Our CLOs also kept elected representatives up to date on the proposed Lissinagroagh Wind Farm via email or post as well as any stakeholder who asked for email updates. This level of commitment will continue as the project progresses.

At all stages communications material included the CLOs' mobile numbers, the project email, postal address and project website.

Our education programme

FuturEnergy Ireland's education programme promotes an awareness and understanding

of climate change. As part of this, in spring 2023 CLOs Tom and Eamonn administered the STEAM Education "Climate in a Box" initiative and led interactive workshops with local schools exploring climate change.

From April to June 2024, FuturEnergy Ireland ran a biodiversity initiative led by the CLOs for five local primary schools that included the distribution of Biodiversity for Schools 'Bosca Dulra' nature boxes packed with seeds, activities and worksheets. The initiative also included workshops, biodiversity projects and a nature photography competition.

Sponsorship of the Hare's Corner

In 2024, FuturEnergy Ireland supported the Hare's Corner initiative in Co Leitrim, which helps landowners, community groups and schools to enhance biodiversity on their land.

Our funding supported 40 projects across the county, including 11 native woodlands, 14 heritage orchards, 6 plans for water, 4 wildlife ponds, 5 plans for nature.

This initiative providing an estimated 1,000 people with access to these new "nature spaces" in Co. Leitrim.

The team has placed a strong focus on open communication with the local community



A constraints-led design approach

Constraints-led design is a commonly used, best practice approach employed in wind farm design. Using this method, the design team identifies environmental sensitivity within the project study area to pinpoint suitable areas for wind turbines. The resulting area is known as the 'developable area'.

The site study area will have been chosen based on its viability in terms of wind resource, land size, planning policy and the availability of a connection to the national grid (Figure 1).

The design of the proposed Lissinagroagh Wind Farm follows recommendations set out in the Wind Energy Development Guidelines (WEDGs 2006, Department of Housing, Local Government and Heritage) and Best Practice Guidelines for the Irish Wind Energy Industry (Irish Wind Energy Association, 2012).

The design is also broadly in line with the Draft Revised Wind Energy Development Guidelines, December 2019 (Draft WEDGs 2019).

Gathering information

The first step is gathering information through detailed desk-based assessments, field surveys and consultation. Key environmentally sensitive features (also known as sensitive receptors) are mapped, which include:

- Private dwellings
- Protected sites such as Special Areas of Conservation, Special Protection Areas or Natural Heritage Areas
- Hydrological features such as streams
- Areas prone to flooding
- Sensitive ecological habitats
- Known nesting sites of protected bird species
- Steep terrain or areas that may be potentially susceptible to landslides
- Designated sensitive views or scenic routes
- Places of archaeological or cultural heritage significance

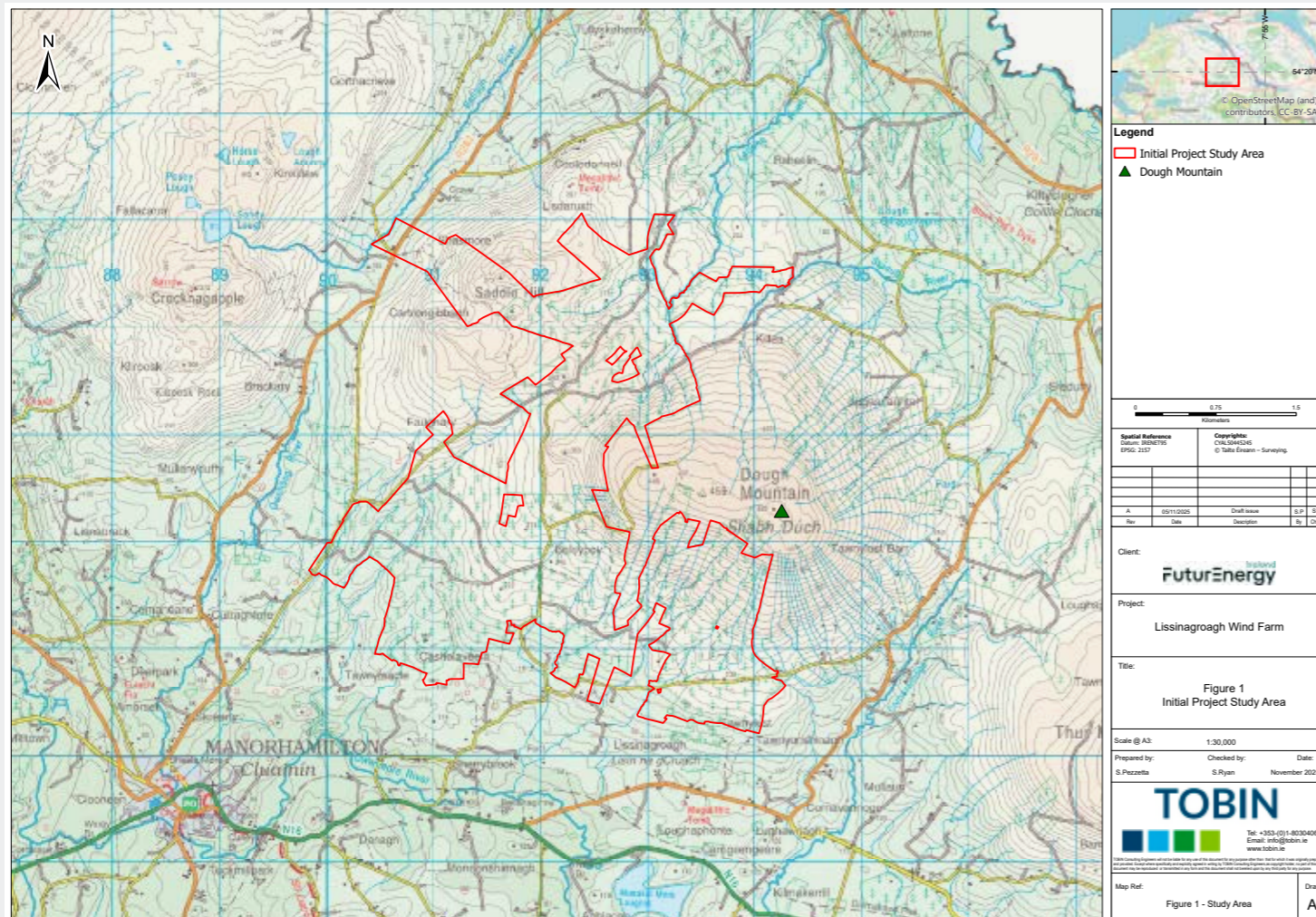
Applying setback buffers

The constraints mapping process involves placing buffers around constraints to identify the areas within which development is generally not suitable, subject to more detailed assessment.

The following constraints and buffers were applied to the proposed Lissinagroagh Wind Farm:

- A minimum 740 metre setback from residential dwellings
- Rivers and streams buffers
- Recorded archaeological sites and monuments buffer
- Biodiversity exclusion zone buffer
- Telecommunications system buffers plus operator-specific buffer
- Existing wind turbine buffer

Figure 1 Initial project study area



The size of the proposed wind farm has decreased from 20 turbines in the first draft layout to 14 turbines in the proposed project layout



In the case of Lissinagroagh Wind Farm, the setback buffer applied from dwellings is more than 740 metres.

This exceeds the requirements of both the current WEDGs and the Draft WEDGs. The current WEDGs set out a minimum setback requirement of 500 metres. The Draft 2019 WEDGs recommend a minimum setback distance equal to four times the tip height or 500 metres, whichever is largest.

Figure 2 (below left) shows how this property setback buffer affects the developable area.

As the map shows with the areas highlighted in pink, this design constraint has removed a significant portion of land from consideration.

Environmental sensitivities dictate a large proportion of design constraints. However, other considerations such as proximity to houses, existing third-party infrastructure, landscape and visual considerations, and community feedback also influence the identification of the final developable area.

Figure 3 (below) shows the setback buffers applied to rivers and streams, telecommunication links and recorded archaeological sites, existing roads, high voltage electrical lines, public roads and trails at the proposed Lissinagroagh Wind Farm site.

The initial constraints study identified a significant viable area within the overall study area. The initial turbine layout comprised 20 turbines within a larger study area.

Following more detailed survey and constraints analysis, including avoidance of identified sensitive ecological receptors and maintaining a 740 metre setback from residential dwellings, and consideration of feedback from the EIA scoping consultation exercise and the EIA specialist consultants, the number of turbines was reduced to 18 in the next draft design.

Figure 2 Setback buffers from dwellings applied (pink)

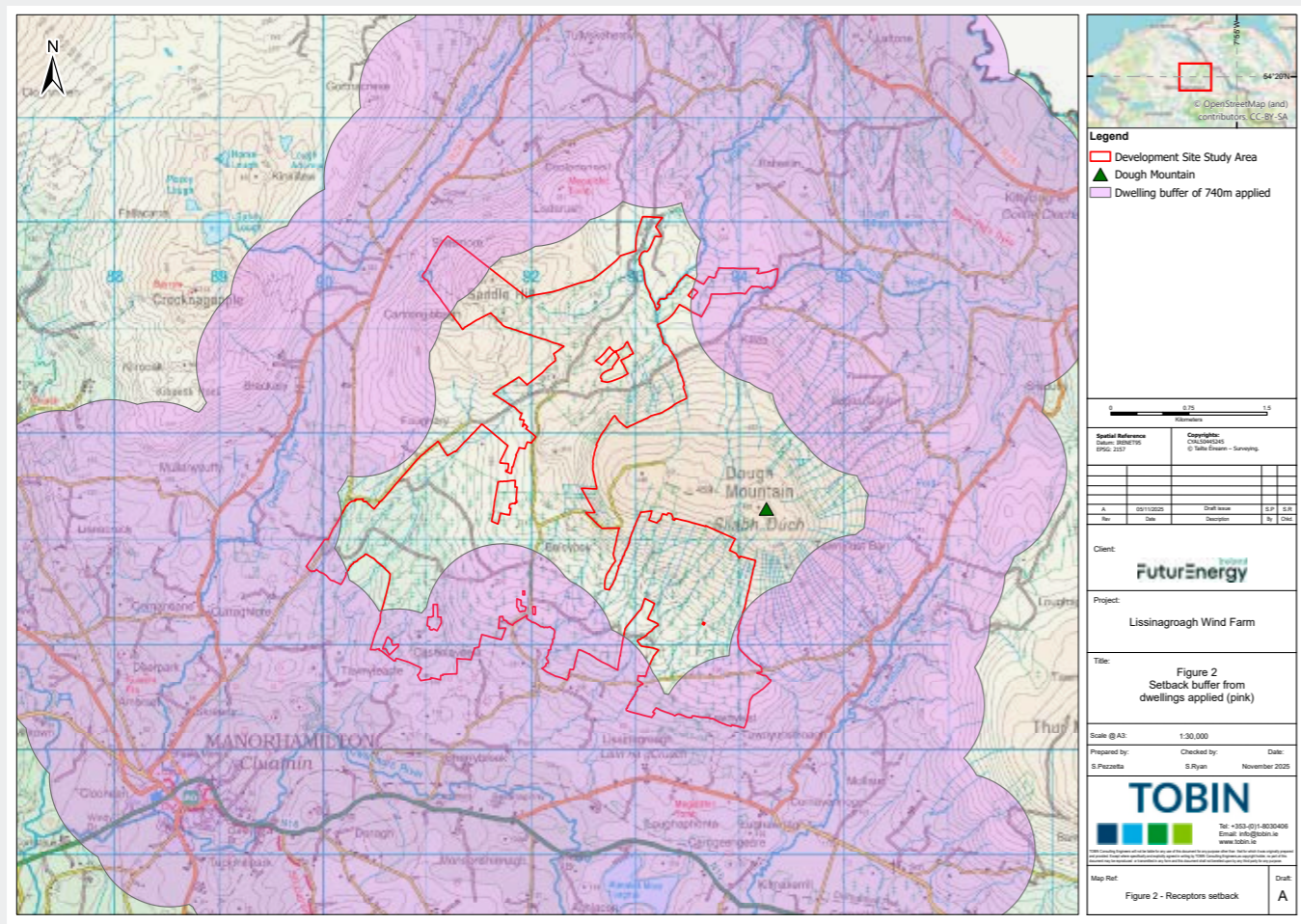
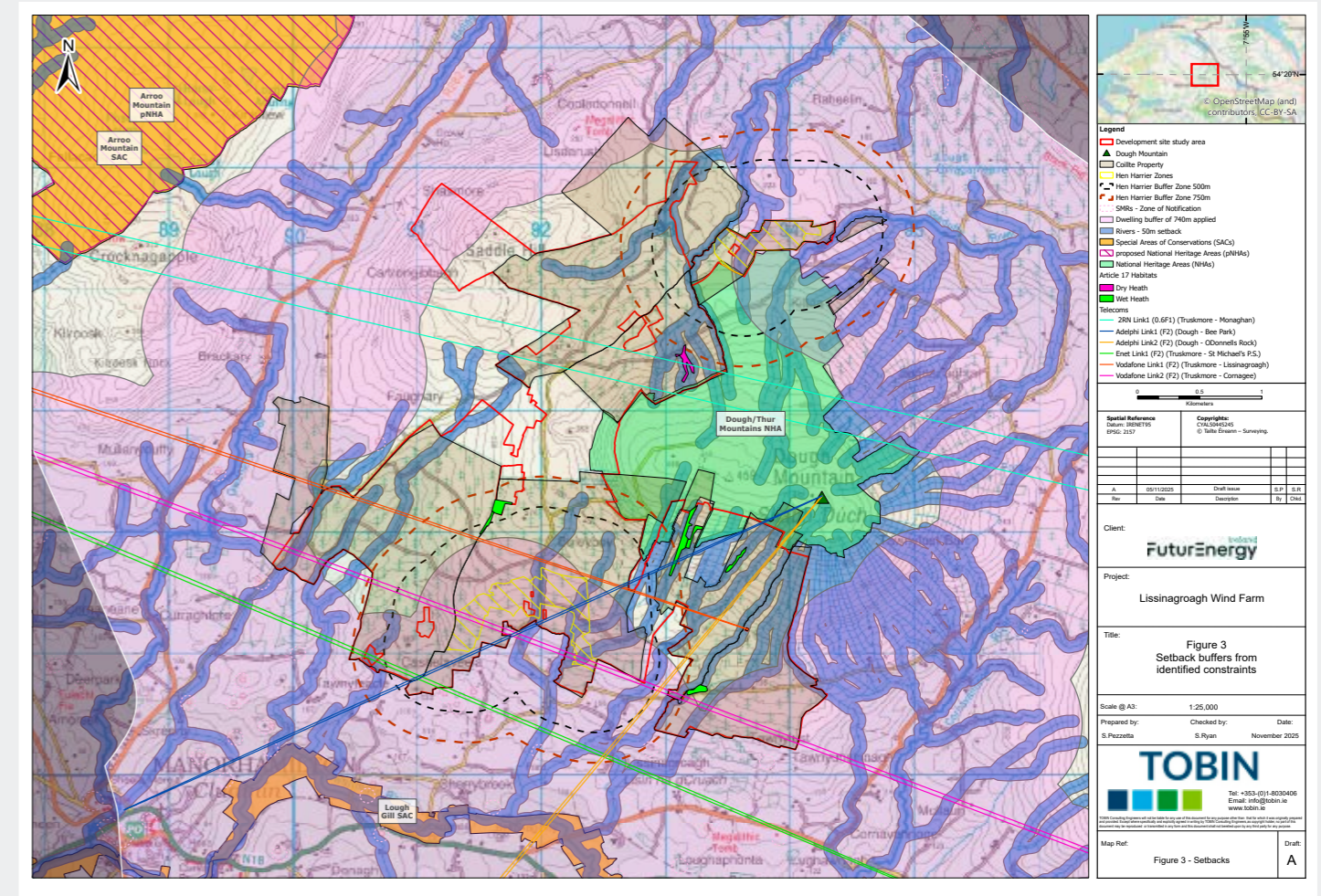


Figure 3 Setback buffers from dwelling and other identified constraints



Mapping the Developable area

When all the constraints are layered on top of one another, the area available for wind energy development becomes apparent. As you will see (Figure 4), this is significantly smaller than the original study area.

There are further constraints associated with landscape and visuals. One tool used to understand potential visual impact is zone of theoretical visibility (ZTV) mapping. This technique allows the designers to understand from where particular wind turbines (or parts of them) may be visible based on ground topography and indicates potential visual impact at these locations.

From this information, 3D models and photomontages are prepared to further inform the wind farm layout and to optimise turbine positioning to limit visibility from key viewpoints.

While it was considered that a wind energy development could be accommodated within this modified transitional upland setting, the initial-stage wireframe photomontages identified the potential for more pronounced visual effects to occur at certain scenic designations and sensitive landscape within the study area.

Recommendations were provided to diminish both the visual presence and intensification of the development, while reducing the sense of clutter and potential for negative aesthetic effects from surrounding scenic areas and designations.

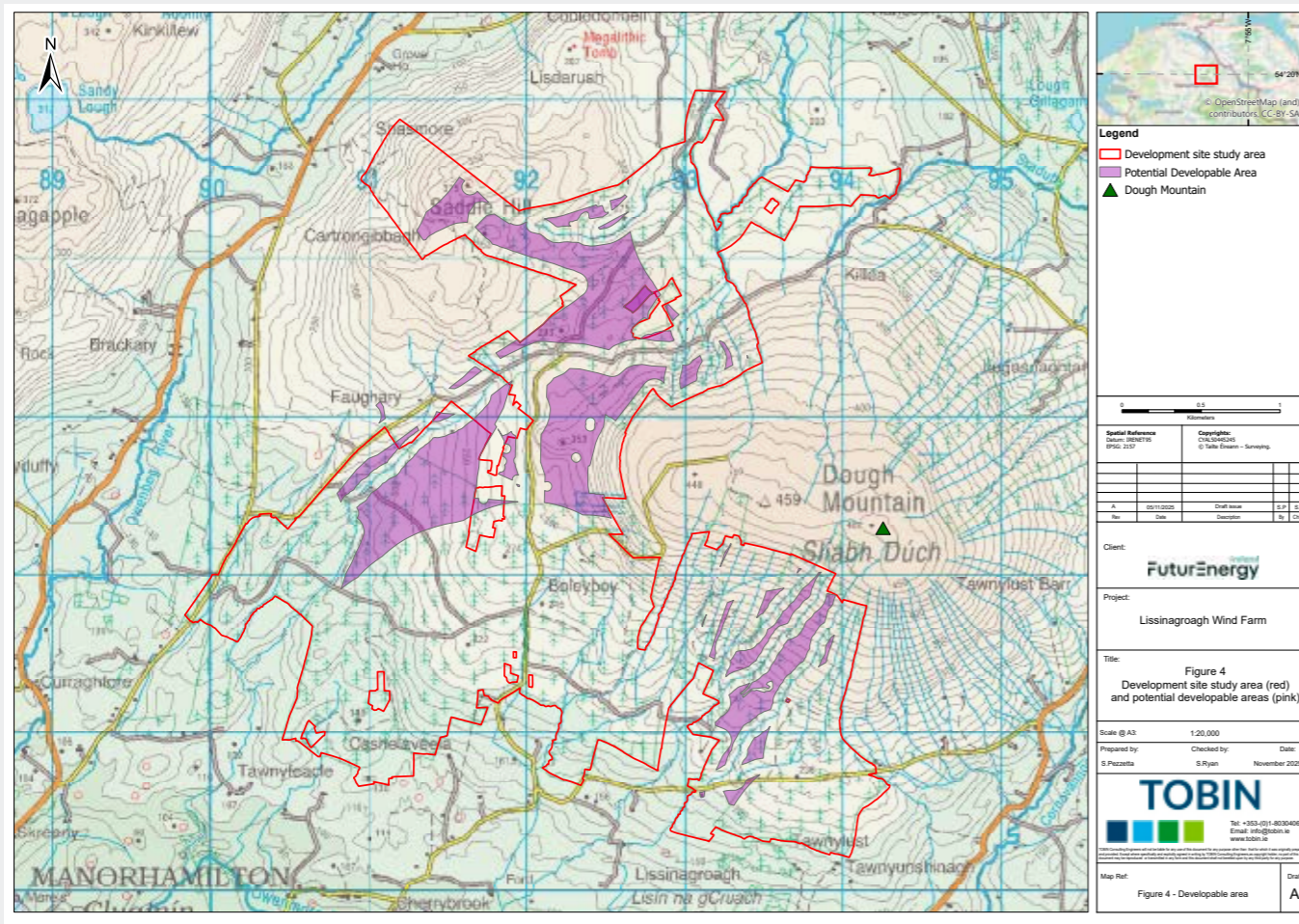
In combination with other environmental constraints, a final turbine layout comprising 14 turbines was proposed. This revised layout demonstrated a substantially reduced visual presence of the development from surrounding receptors, while considerably diminishing the degree of visual clutter and the potential for notable negative aesthetic effects.

The team of environmental specialists designed and reviewed the preliminary locations for the other elements of the wind farm design such as onsite access tracks, crane hardstandings, the onsite substation and temporary compounds. Their feedback resulted in updates to produce the final site layout.

The present project layout overleaf, Figure 5, is the layout intended to be submitted for planning permission, any late changes notwithstanding.

In our Virtual Tour, you will find photomontages that clearly show what the wind farm would look like, alongside existing turbines, from different viewpoints. This is available at www.lissinagroaghwindfarm.ie.

Figure 4 (below) shows development site study area (red) and potential developable areas (pink)



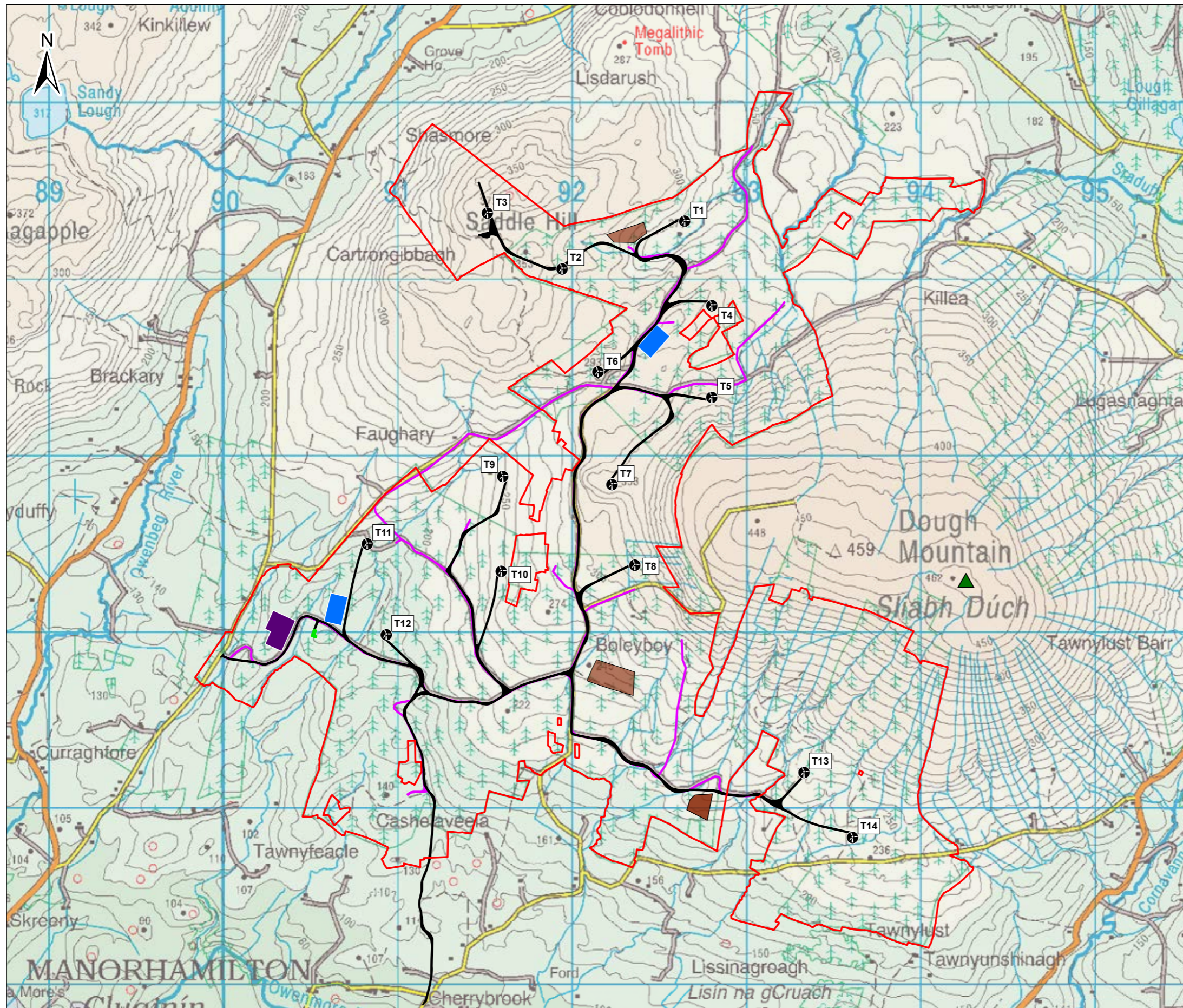


Figure 5 Project layout map

Legend

- ▲ Dough Mountain
- Site Layout
- Development Site Study Area
- Proposed Turbine Layout
- Proposed Construction Compound
- Existing Site Roads
- Proposed Site Roads
- Met Mast Location
- Proposed Substation Compound
- Proposed Borrow Pit Locations

0 0.5 1
Kilometers

Spatial Reference
Datum: IRENET95
EPSG: 2157

Copyrights:
CYALS0445245
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Rev	Date	Description	By	Chkd.
A	04/03/2026	Draft issue	S.P.	S.R.

Client:
FuturaEnergy

Project:
Lissinagroagh Wind Farm

Title:
Figure 5
Present project layout

Scale @ A3: 1:20,000

Prepared by: S.Pezzetta
Checked by: S.Ryan
Date: March 2026

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Map Ref: Figure 7 - Site Layout
Draft: A

The proposed development

Details of the latest project design are provided below. This is subject to change before the planning application is submitted:

- Erection of 14 wind turbines.
 - Overall blade tip height between 180 metres and 185 metres.
 - Rotor diameter range from 149 metres to 163 metres.
 - A hub height range from 101 metres to 110.5 metres.
- Plus all associated foundations and hard-standing areas in respect of each turbine.
- Upgrading of existing access points on L61801, L6184 and L61844.
- Construction of two temporary construction compounds with associated temporary site offices, parking areas and security fencing.
- Installation of one permanent meteorological mast with a height of 100 metres.
- Three borrow pits.
- Upgrading of approximately 8km of existing access tracks, to include passing bays and all associated drainage.
- Construction of approximately 9 km of new access tracks to include passing bays and drainage;
- Construction of drainage and sediment control systems.
- Construction of one permanent 110kV electrical substation including:
 - One EirGrid control building.
 - One Independent Power Producer control building.
- All electrical plant and infrastructure and grid ancillary services equipment
- Associated parking, lighting, security fencing, wastewater holding tank, rainwater harvesting equipment, all associated infrastructure and services including site works and signage.
- All associated underground electrical and communications cabling connecting the wind turbines to the proposed substation.
- All works associated with the connection of the proposed wind farm to the national electricity grid, via a tail-fed 110 kV underground cable connection, approximately 33.5km to the existing 110kV Srananagh Substation.
- All related site works and ancillary development including berms, landscaping and soil excavation.
- Forestry felling to facilitate construction and operation of the proposed project and any onsite forestry replanting.
- Biodiversity enhancement areas.

View from L6184 at Cashelaveela, south of site.



The grid connection

To ensure the power generated by the wind farm feeds into the national grid, a connection is required between the proposed Lissinagroagh Wind Farm substation and the existing ESB Networks Srananagh 110kV substation, approximately 33.5 km from the wind farm development (**Figure 6**).

A single grid connection would be constructed that would become a permanent component of the Irish national grid network. The connection method involves an underground cable that runs primarily underneath existing roads, diverting from the road in short sections where required.

There are two sections where minor deviations off-road would be necessary to facilitate Horizontal Directional Drilling (HDD) at watercourse crossings.

The proposed underground cable for the wind farm is being designed and constructed to meet Eirgrid standards. The cable would be installed in a similar manner to existing local utilities such as other high voltage cabling and water mains.

The substation and grid connection fall under a different part of the Planning and Development Act, s182A, therefore this will be a separate planning application to An Coimisiún Pleanála (the wind farm which will be submitted under s37E of the Planning and Development Act).

An assessment of the effects on local traffic during the potential construction and operational phase has been undertaken.

If this project receives a planning consent, the project team will work closely with Leitrim County Council to ensure compliance with planning conditions. A comprehensive traffic management plan will be followed, and local access will be maintained for residents and regular road users.

The turbine delivery route

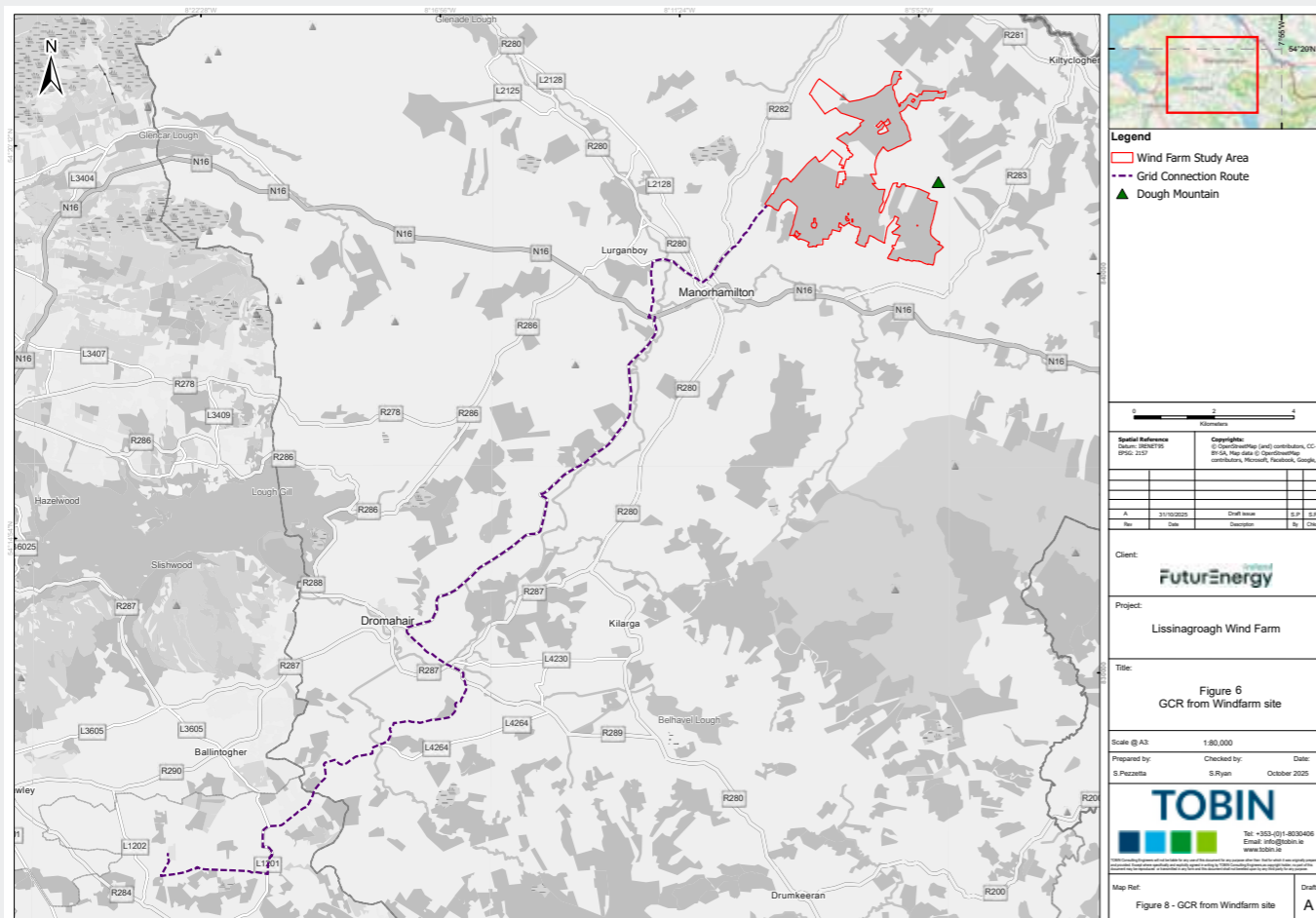
Killybegs Port is the intended port of entry for large turbine components. Vehicles delivering large turbine components and other abnormal loads to the site would depart from here and travel southeast around Donegal Town, then

travel southwest towards Sligo Town before approaching Manorhamilton and the proposed wind farm site from the south. Delivery vehicles would continue on the L6184 and use a proposed new road that forms the proposed site entrance of Lissinagroagh Wind Farm during the construction stage for turbine delivery.

Project photomontages

Photomontages show what the project will look like from certain viewpoints, if permitted and constructed as designed. The full set of photomontages is available in the Virtual Tour at www.lissinagroaghwindfarm.ie

Figure 6 Proposed grid connection route



View from L6117 at Gortnacreeve, Co. Leitrim



View from L61807 at Raheelin, Co. Leitrim





Local Community Benefits

Lissinagroagh Wind Farm is an opportunity to create positive, lasting change for the local community. By supporting local employment, contributing annual rates and establishing a Community Benefit Fund, the proposed project would provide meaningful support where it matters most.

The Renewable Electricity Support Scheme (RESS) is a key initiative in the Government's Climate Action Plan. Every RESS-supported project is required to give back through a Community Benefit Fund. This fund is designed to enhance the environmental, social and economic wellbeing of the local area, ensuring that the community thrives alongside the development.

We believe that those living closest to the project should see direct benefits, which is why a portion of the fund is allocated to Near Neighbour payments.

At the same time, we are committed to ensuring that the wider community also gains from this initiative, fostering a stronger, more vibrant local area for everyone.

Together, we can harness the power of renewable energy to support jobs, strengthen our community and build a more sustainable future.

What will the Community Benefit Fund look like?

In May 2025, the Department of Climate, Energy and the Environment published an updated guide to Community Benefit Funds under the Renewable Electricity Support Scheme, the Government's 'Rulebook for Community Benefit Funds under RESS'.

Under RESS, communities will be at the heart of the decision-making process, which gives

them the opportunity to maximise their own Community Benefit Fund. One particular focus is to support local initiatives that align with the UN Sustainable Development Goals such as home and community hall retrofits, pollinator farms, cycle paths, educational scholarships and sports club activities.

The scheme mandates all RESS projects to establish a Community Benefit Fund worth €2 per MWh (megawatt hour) of generated electricity for any future wind farm. Therefore, the project owners are required to contribute €2 per MWh annually into a community fund for the RESS contract period, i.e. the first 15 years of operation.

In addition, FuturEnergy Ireland commits to a further €1/MWh for the remaining lifetime of the wind farm. The total fund per annum will depend on the final power output of a successful project.

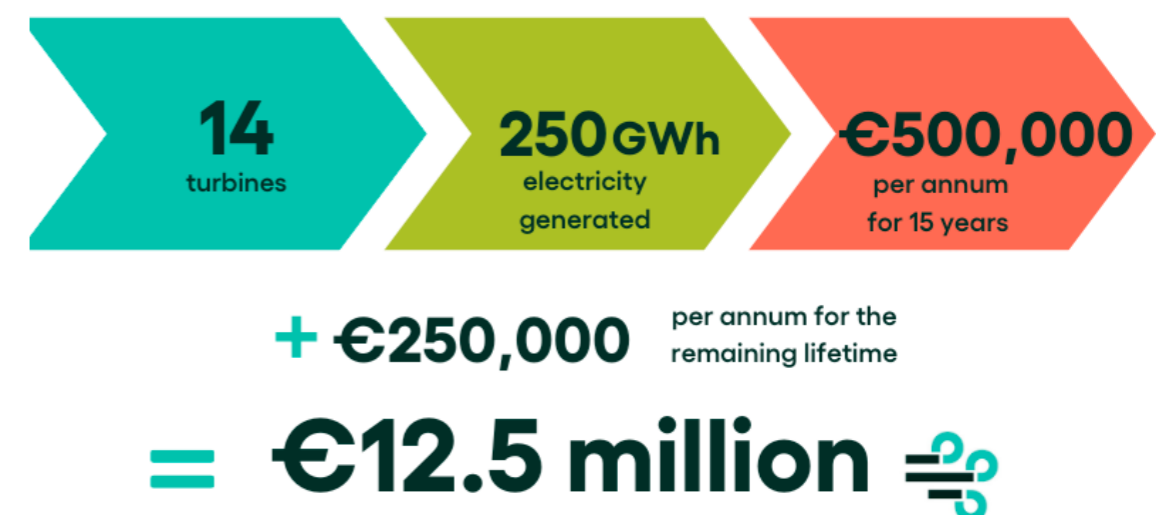
Lissinagroagh Wind Farm, if constructed as proposed, has the potential to produce between approximately 222,000 and 290,000 MWh of clean electricity a year depending on wind resources. This means that the project could contribute approximately €500,000 per annum to the Community Benefit Fund for the first 15 years of its operational life.

For the remaining lifetime of the wind farm, FuturEnergy Ireland commits to contributing an additional €1/MWh, which is estimated to be €250,000 per year. Therefore, over the expected 35-year lifetime of Lissinagroagh wind farm, the Community Benefit Fund will be in the order of €12.5 million.

If the project seeks an alternative route to market, FuturEnergy Ireland pledges to match these contributions.

Communities will be at the heart of the decision-making process

Community Benefit Fund



Estimates based on RESS mandate

What can the fund be used for?

Government guidelines for the annual distribution of this fund are as follows:

Direct Household Payments: A payment of €1,000 is allocated annually to each household located within a 1 km radius of onshore wind projects, as well as payments of between €500 and €1,000 for households between 1 km and 2 km of wind projects.

Sustainable Development Initiatives: At least 40% of the fund supports local projects focusing on initiatives aligned with the 17 United Nations Sustainable Development Goals. Projects are selected through a public and open process where initiatives are proposed by local clubs, societies and other entities.

Administration Costs: Up to 10% of the fund may be used for administrative purposes to ensure effective governance and operation of the fund.



How the fund works

If Lissinagroagh Wind Farm reaches commercial operation, it is envisaged that the project team and the local community will work together to establish a Local Fund Committee for the Lissinagroagh Wind Farm Benefit Fund. This local group will make decisions on funding allocations and, with the assistance of an administrator, manage the fund, ensuring transparency and good governance.

To read the Government's 'Rulebook for Community Benefit Funds under RESS, visit www.lissinagroaghwindfarm.ie/community



Amenity & recreation

FuturEnergy Ireland takes pride in providing quality amenity and recreation facilities on its wind farm developments where appropriate.

For an example of this, see Sliabh Bawn Wind Farm (www.sliabhbawnwindfarm.ie). We are investigating the site's potential for recreational activities such as upgraded tracks and trails, links to walking routes, a viewing point, seated areas and associated signage.

The next step is exploring this potential with community members near the proposed Lissinagroagh Wind Farm.



Environmental benefits

The proposed development will have an installed capacity of between 222,000 MWh and 290,000 MWh subject to final design. This means it will have the capacity to provide enough electricity to power between 53,000 and 69,300 homes in the area annually.

The proposed Lissinagroagh Wind Farm would save between 50,400 tonnes (tCO₂e) and 66,600 tonnes of carbon emissions every year of operation. Using the average figure, that's a total of 2.04 million tonnes of carbon emissions saved over the 35-year lifetime of the project. This is the equivalent to displacing the emissions of 31,500 to 41,500 average cars every year.

Electricity generated by Lissinagroagh Wind Farm would not produce any significant CO₂ emissions, but carbon emissions are caused during construction, installation and decommissioning. Studies calculate the carbon payback period of an onshore wind farm to be between six and 24 months.

Our calculations indicate that the estimated payback period for the Lissinagroagh Wind Farm project is just under 11 months.



The proposed Lissinagroagh Wind Farm would provide enough electricity to power between 53,000 and 69,300 homes annually



Employment opportunities

At peak construction, up to 100 people will be directly employed. Two or three long-term, technical employees are also required on-site to run the wind farm, with numerous other jobs being supported in ancillary functions. Demand for a wide range of products and services will create indirect employment.



Council rate contributions

Under current guidelines, it is estimated that Leitrim County Council would receive a contribution of between €1.2million and €1.5 million in annual rates from Lissinagroagh Wind Farm. This would have a positive impact on local infrastructure and amenities such as roads, public lighting, libraries and fire services.

The Environmental Impact Assessment Report

The Environmental Impact Assessment Report (EIAR) that accompanies the planning applications will focus on the areas outlined here. TOBIN is compiling the EIAR with the input of other specialist consultants.

- Chapter 1 Introduction
- Chapter 2 Description of the Proposed Project
- Chapter 3 Consideration of Reasonable Alternatives
- Chapter 4 Population and Human Health
- Chapter 5 Biodiversity
- Chapter 6 Ornithology
- Chapter 7 Land, Soils and Geology
- Chapter 8 Hydrology and Hydrogeology
- Chapter 9 Noise and Vibration
- Chapter 10 Shadow Flicker
- Chapter 11 Air Quality
- Chapter 12 Climate
- Chapter 13 Landscape and Visual Amenity
- Chapter 14 Archaeology and Cultural Heritage
- Chapter 15 Material Assets, Telecommunications and Aviation
- Chapter 16 Traffic and Transportation
- Chapter 17 Major Accidents and Natural Disasters
- Chapter 18 Interaction of the Foregoing
- Chapter 19 Schedule of Mitigation

Below please find an introduction to some of the EIAR chapters. More information will be available in the full EIAR that accompanies the planning application.

Environmental Surveys and Studies

The environment is extremely important to us. Thorough studies and surveys in and around the site are essential to design a wind farm that respects the surrounding environment.

In 2017 the Lissinagroagh site was taken forward as a potential area for wind energy development and feasibility studies were completed. Bird surveys began in 2017 and other environment surveys commenced in 2020. Detailed surveys continued from 2022 to 2025 including those on ornithology, biodiversity, landscape and visual, ground investigations, hydrology and hydrogeology, which led to revisions of the project design.



Thorough studies and surveys in and around the site are essential to design a wind farm that respects the surrounding environment

Environmental Impact Assessment Scoping and Consultation

An Environmental Impact Assessment scoping report was undertaken in 2021 and an updated report was issued in December 2024, identifying all the factors that need to be considered in the EIAR.

There were more than 50 consultees, including Leitrim County Council and the Environmental Protection Agency.

Biodiversity

Ecological studies were carried out at the proposed wind farm site, on the Grid Connection Route and along the Turbine Delivery Route between 2020 and 2025. These surveys examined a wide range of features consisting of habitats, mammals, bats, aquatic species, marsh fritillary butterfly, amphibians and reptiles.

The results were used to identify species and habitats within the Zone of Influence (ZOI, the area that could potentially experience direct or indirect physical or environmental impact from the project) that are of high conservation value and/or protected under legislation. Mitigation and compensation measures have been designed to protect wildlife and offset any residual effects on important ecological features.





There are no NATURA 2000 sites, i.e. Special Areas of Conservation (SACs) or Special Protection Area (SPAs), within the study area. There are three SACs within 2km: Arroo Mountain SAC, Lough Gill SAC and Lough Melvin SAC.

The Dough/Thur Mountains Natural Heritage Area (NHA) adjoins the study area. This NHA contains an extensive area of upland blanket bog, with associated upland heath and grassland.

With proposed mitigation and compensation measures in place, no significant residual effects on the conservation objectives of important ecological features are anticipated as a result of the proposed project.



Ornithology

Bird surveys began in 2017 and concluded in September 2025 including during seven seasons between 2020 and 2025 (five breeding seasons and two non breeding seasons).

Specialist ornithologists carried out a full suite of breeding and non breeding surveys.

These included flight activity surveys, breeding walkover surveys, breeding woodcock surveys, raptor surveys, hen harrier foraging surveys, red grouse surveys, winter walkover surveys and hen harrier winter roost surveys.

Mitigation measures will be implemented to minimise impacts on breeding birds during construction, including pre-construction confirmatory surveys and/or carrying out works outside the breeding season where possible.

The Lissinagroagh Wind Farm Outline Biodiversity Management Plan (OBMP) sets out the framework and practical long-term management measures for lands designated to provide nesting and foraging habitat for breeding hen harrier and other key species identified in the EIAR. These lands will provide wider biodiversity benefits in addition to improved foraging habitat for hen harrier.

Cumulative and transboundary assessments indicate no significant cumulative or transboundary effects are expected. A structured post-construction monitoring programme will verify assessment predictions and support adaptive management if required.

The proposed project is not predicted to result in significant adverse residual effects on bird populations at the scales assessed in the EIAR.

Land, Soils and Geology

The proposed site is located in a relatively mountainous area. Saddle Hill in the northwest of the site is 375 metres AOD (above ordnance datum) and Dough Mountain

is located within and along the eastern site boundary and has a maximum elevation of 462 metres AOD.

Site investigations undertaken within the site indicate that peat depths vary from 0.1 metres to 3.2 metres in the north and 0.1 metres to 1.2 metres in the south.

Alluvium is mapped along the streams to the centre and south of the site, and is typically well sorted, loose silt and sand-sized particles. Scree is also located to the west of the site along the slopes of Dough Mountain; however, the proposed wind farm layout has avoided the scree areas.

A portion of the southern site entrance work areas are mapped as deep, well-drained mineral and deep, poorly drained soils.

According to GSI mapping, there are no karst features present within the site. However, several karst features, including dolines, were identified during site walkovers. The Environmental Impact Assessment Report (EIAR) has addressed these karst features and they will be avoided.



Site investigation work, including site walkovers, peat depth probing, borehole drilling and trial pit testing, was carried out. TOBIN and Ciaran Reilly, the geotechnical engineering consultancy, have undertaken a robust geotechnical and peat stability assessment of the proposed Lissinagroagh site that informed the design process, including the siting of all proposed main infrastructure and drainage control measures. These studies showed that the proposed wind farm site is a low sensitive site in terms of land soil and geology and poses a low risk for landslide.

Mitigation measures will be fully integrated into the proposed project to prevent instability or erosion of soils and peat. These measures will ensure that the development does not give rise to significant negative effects on land, soils or geology over the lifetime of the project.

Hydrology and Hydrogeology

Comprehensive desk studies, site visits and intrusive site investigation examined the baseline environment of the proposed Lissinagroagh Wind Farm project. Hydrology specialists co-ordinated and reviewed the site investigations, which aided in the development of a hydrogeological conceptual model of the proposed wind farm site.

The study area is characterised by a large number of watercourses. These range from naturally occurring upland streams to modified drainage channels within forested areas at mid to lower elevations.

The eastern part of the site is characterised by several watercourses in deep ravines, the majority of which have existing crossings in place as part of the existing forestry road network.

All of these watercourses are of moderate to steep gradient and higher flow rate, representing natural watercourses typical of eroding/upland rivers. Agricultural and forestry activities have modified many of the naturally occurring streams in the area. Streams and drainage channels were assessed and mapped during field surveys.

A Flood Risk Assessment (FRA) was conducted to systematically identify, evaluate and mitigate potential flooding risks from sources such as rivers, surface water, groundwater and overland flow.

Reference to the GSI National Aquifer Map indicates that the proposed project is underlain by a number of Regionally Important to Poor Aquifers. The groundwater bodies and related quality ratings and risk statuses were reviewed during the project assessment.

The proposed development will not have a significant effect on the hydrology and hydrogeology environment through the application of best practice mitigation measures.



Archaeology and Cultural Heritage

The Archaeology and Cultural heritage study assesses the potential effects of the proposed Lissinagroagh Wind Farm. This study informed the project's design and construction to avoid or minimise any direct or indirect impacts including those on the setting of cultural heritage.

Following the application of mitigation measures such as monitoring of excavations, there will be no significant residual effects on the previously unrecorded archaeological, architectural or cultural heritage resource as a result of construction. Any remains that are encountered during monitoring or test trenching will be subject to preservation by record or preservation in-situ.

Noise and Vibration

The main sources of noise from a wind turbine include aerodynamic noise (rotating blades in the air) and mechanical noise (from the gearbox and generator). Noise only occurs above the 'cut-in' wind speed and below the 'cut-out' wind speed. The typical 'cut-in' wind speed of a modern turbine is 3 metres per second (m/s) and the 'cut-out' wind speed is around 25m/s to 30 m/s.

Construction noise will occur during excavation and earth moving, the laying of roads and hardstandings, the transportation of materials and the erection of turbines. The construction stage will be phased and temporary.

Specialist noise and vibration assessments were undertaken for the construction, operational and decommissioning phases.

The cumulative impact with the adjacent Faughary Wind Farm was also considered. The study also addresses vibration, low frequency noise and infrasound.

To inform the noise impact assessment, baseline noise monitoring of the existing noise environment was carried out. Following the establishment of existing noise levels prior to development, appropriate noise level limits were then determined in line with government policy and best practice guidance. The predicted noise levels from Lissinagroagh Wind Farm were then compared against these limits. The noise assessment shows that these limits will not be exceeded.

Noise during construction, operation and decommissioning would be managed to comply with best practice, legislation and relevant guidelines.



A noise monitor being installed

A post-operational noise monitoring programme will be carried out to make sure the wind farm is operating within the planning guidelines and results are submitted to the planning authority. The noise levels associated with the wind farm must comply with the limits set out in any relevant planning conditions.

Landscape and Visual Amenity

The assessment of landscape and visual effects examines the effects of the development on the landscape as a resource in its own right and also views of that landscape experienced by those engaged in particular activities or resident at certain locations.

Zone of theoretical visibility (ZTV) mapping and visual representations of the initial and working layouts were prepared. These techniques allow designers to understand from where particular wind turbines (or parts of them) may be visible based on ground topography and indicate potential visual impact at these locations.

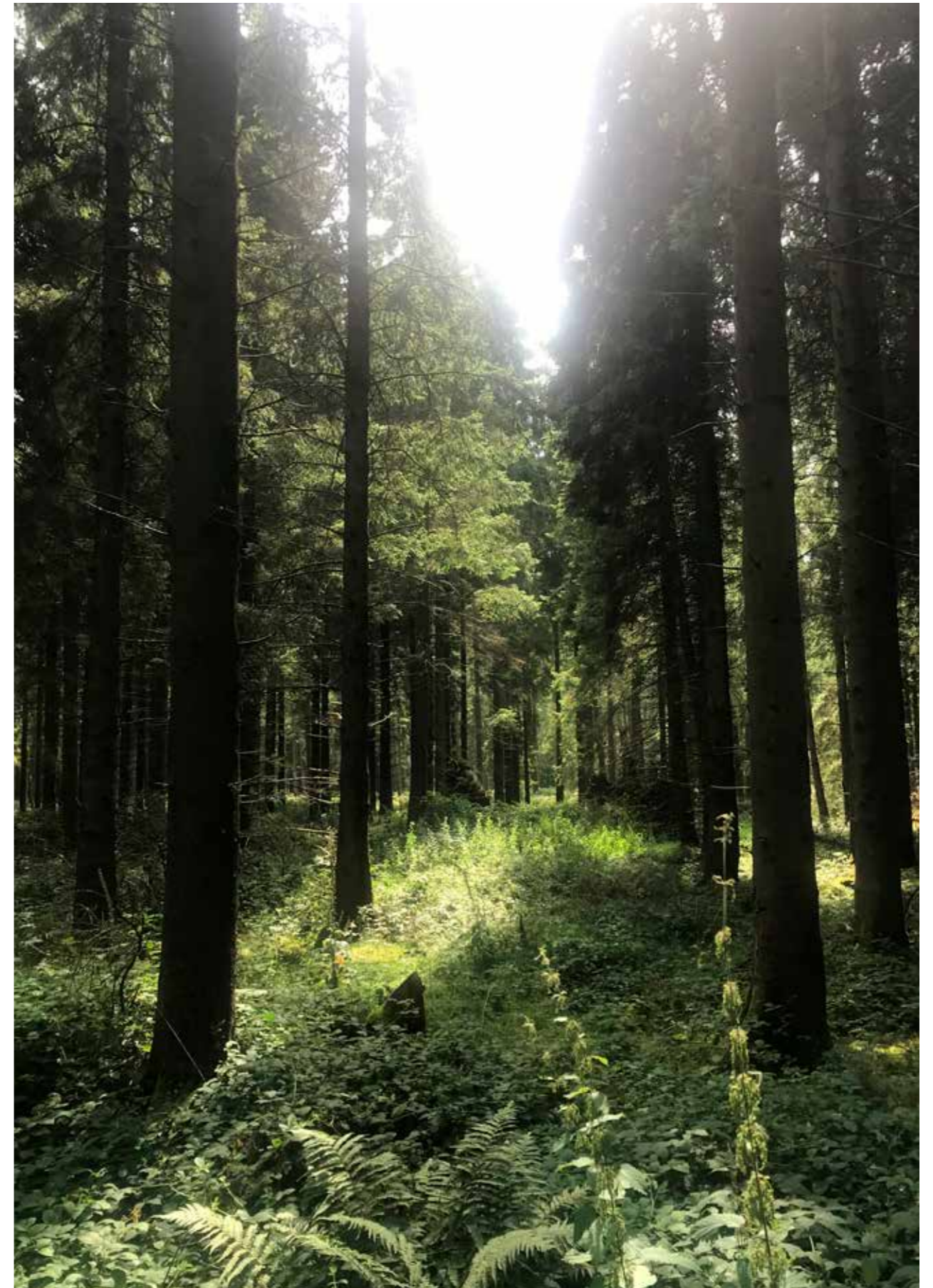
From this information, the team prepared 3D models and photomontages to further

inform the wind farm layout and optimise turbine positioning to limit visibility from key viewpoints, which resulted in the relocation of turbines. The design of Lissinagroagh Wind Farm has taken into consideration the effects on the landscape as well as the effects of the existing wind farm and this proposed development in the area.

In our Virtual Tour, you will find photomontages that clearly show what the wind farm would look like, alongside existing turbines, from different viewpoints. This is available at www.lissinagroaghwindfarm.ie.

In combination with other environmental constraints, a project layout comprising 14 turbines was proposed. This revised layout demonstrates a substantially reduced visual presence of the development from surrounding receptors.

Furthermore, the revised layout reduced potential impacts on sensitive landscape areas and scenic designations compared with the initial 20-turbine array.



The Planning Process

When the Environmental Impact Assessment Report is complete, FuturEnergy Ireland will be ready to submit both planning applications – one for the wind farm and the other for the grid connection – to An Coimisiún Pleanála.

The intention to submit the application will be advertised in local newspapers, and notices will be erected at/around the site to include any entrances on public roads.

When all documentation has been received and validated by An Coimisiún Pleanála, the full wind farm application will be available to view at www.lissinagroaghplanning.ie. The full grid connection documentation will be available at www.lissinagroaghgridplanning.ie.

The planning documents will also be available on An Coimisiún Pleanála’s website www.pleanala.ie. The EIAR will also be available for viewing at the offices of An Coimisiún Pleanála and Leitrim County Council.

The planning applications will be submitted directly to An Coimisiún Pleanála by the project company, FuturEnergy Lissinagroagh Designated Activity Company. This is the regulatory process when a project is of sufficient scale to be deemed Strategic Infrastructure Development (SID) i.e., with a capacity greater than 50 MW.

During the project design and environmental assessment, consultation was carried out with An Coimisiún Pleanála and the local planning authority, Leitrim County Council. The planning application will be supported by an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS).

How can you engage with the planning process?

There is a useful Frequently Asked Questions section on An Coimisiún Pleanála’s website at

<https://www.pleanala.ie/en-ie/strategic-infrastructure-development> that provides guidance on public participation. Any person or body may make submissions on the project to the Board while the documents are available for viewing after the application has been submitted.

View from Lurganboy Chapel of Ease at Barrackpark



Next Steps

- **Share your feedback**

We encourage you to contact our Community Liaison Officers with any queries and questions.

- **Community engagement clinics by appointment-only**

An opportunity to meet the team and find out more about the proposed Lissinagroagh Wind Farm. The clinics will take place on Tuesday March 31, 12.30pm-8pm, and Wednesday April 1, 12pm-6pm, at Rossinver Community Centre, The Cabin, Sraud, Rossinver, F91 NY6V.

Please call Tom 087 352 5961 or email lissinagroagh@futureenergyireland.ie to book your appointment time.

- **The planning application**

When the EIAR is complete, FuturEnergy Ireland will submit both planning applications to An Coimisiún Pleanála for the proposed Lissinagroagh Wind Farm and grid connection. It is anticipated that these will be submitted shortly.



The clinics will take place at Rossinver Community Centre on:

Tuesday March 31, 12.30pm-8pm

Wednesday April 1, 12pm-6pm

Book your appointment with our CLO



Contact Us

We encourage and welcome your input and comments. Please get in touch either by phone, e-mail or post:

Call: Community Liaison Officers
Tom Costello on 087 352 5961 or
Eamonn Keavney on 087 608 2061

E-mail: Lissinagroagh@futureenergyireland.ie

Post: Lissinagroagh Wind Farm, FuturEnergy Ireland,
27/28 Herbert Place, Dublin 2. D02 DC97

www.lissinagroaghwindfarm.ie



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