

Knockshanvo Wind Farm

Project Brochure
October 2023



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Introduction

The proposed Knockshanvo Wind Farm is a FuturEnergy Ireland project located approximately 3km south of Broadford and 4km northeast of Sixmilebridge in east Co. Clare.

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 19 live projects across the country in the FuturEnergy Ireland portfolio, including Knockshanvo Wind Farm.

The project team

The team directly involved in the proposed Knockshanvo Wind Farm includes Project Manager Sandra Kelly, two Community Liaison Officers, Kevin Donnellan and Christy O’Dea, as well as several specialists in the areas of grid, stakeholder management, wind resource, planning and policy.

The environmental consultancy MKO is leading a multidisciplinary team in carrying out studies, design and preparation of the planning application and Environmental Impact Assessment Report (EIAR) on behalf of FuturEnergy Ireland.

MKO is Ireland’s largest planning and environmental consultancy. A team of more than 200 experienced professionals work across the planning, environmental, ecology and related fields. The consultancy delivers challenging and complex projects and has an unrivalled track record of success.

MKO has been the lead consultant in securing planning permission, including the completion of EIARs and Natura Impact Statement (NIS) assessments, for approximately 1 GW of renewable energy projects to date.

This brochure has been prepared to:

- Describe the constraints-led design process, which explains how the wind farm layout has evolved.
- Present the final turbine layout that will be submitted with the wind farm 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 the process.
- Provide details of the next steps for the project.

View our Virtual Tour, which has a full set of photomontages of the proposed project from different viewpoints, at www.knockshanvowindfarm.ie

View from St. Peter’s Church in Broadford located approximately 3.1km north of the nearest proposed turbine



The Context

Our planet is warming at a dangerous rate. This summer, extreme weather saw climate-related records smashed: July 2023 was the hottest ever month recorded in human history, which led to drought, heatwaves and wildfires. Here in Ireland, Met Éireann registered the warmest June followed by the wettest July on record. Glaciers are shrinking, sea levels are rising, and animal and plant species face extinction.

According to the Environmental Protection Agency's latest report, Ireland will fall far short of meeting its climate targets. The country is predicted to achieve a reduction of 29% in greenhouse gas emissions by 2030 compared with the national target of 51%. Urgent action is needed. A key pillar of this will be an increase in renewable energy to replace the oil, gas and coal 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.

In May 2022, the amount of onshore wind energy installed in Ireland reached 4,332.5 MW.

The Climate Action Plan (2023) aims to more than double Ireland's onshore wind energy capacity to 9,000 MW by 2030.

The further development of renewable energy sources will also improve Ireland's energy security. Energy security is vulnerable to international price increases, which are being exacerbated by the conflict in Ukraine. This in turn is having an unprecedented inflationary effect across our economy.

EU and national energy policies are seeking to rapidly ramp up renewable generation capacity to reduce our dependence on imported fossil fuels and support more stable and affordable long-term energy prices.

Knockshanvo Wind Farm is being proposed, in part, as a response to these challenges and it has the potential to contribute greatly to both causes.



Raheenleagh Wind Farm, Co. Wicklow

Why onshore wind?

- Wind energy is the largest contributing source of renewable energy in Ireland. It is Ireland's largest and cheapest renewable electricity resource. Wind generation accounted for 34% of all electricity generated in Ireland in 2022. In total, wind energy produced 13.213 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 conventional power plants that burn combustible fossil fuels, wind turbines do not produce atmospheric emissions that cause acid rain or greenhouse gases. Wind energy 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 — approximately a 3% footprint — many other land uses can co-exist such as commercial forestry, farming, recreation and biodiversity management.

Other renewable energy technologies such as offshore wind and solar are also required to meet national renewable energy targets. As well as increasing onshore wind capacity to 9 GW, the Climate Action Plan calls for 8 GW of grid-scale solar and more than 7 GW of offshore renewable energy by 2030.

The Climate Action Plan (2023) aims to more than double Ireland's onshore wind energy capacity to 9,000 MW by 2030



Why this project?

The proposed Knockshanvo Wind Farm is located in east Co. Clare.

The total land parcel extends to approximately 936 hectares, of which a significant area is an operational commercial forest owned by Coillte. The remaining land is third-party property.

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

- The site is not located within a designated Natura 2000 site. It is not within a Special Area of Conservation (SAC) or a Special Protection Area (SPA).
- The site is in an accessible location for connection to the National Electricity Grid via existing electrical substations in the local area.
- There are good annual average wind speeds in the area.
- Setback distances from houses can be achieved to align with the latest government guidance.

- There is a limited network of existing forestry and farm roads within the site that can be upgraded and utilised for the wind farm.
- The majority of the land use on the site can continue and co-exist with an operational wind farm.

Our commitment to you

From the outset, the Knockshanvo project team has placed a strong focus on open communication with the local community. Throughout our engagement, we have actively encouraged the community to contact Community Liaison Officers Kevin Donnellan and Christy O’Dea, whose mobile numbers and email address are on all correspondence along with the website details.

Engagement with the community started in November 2022 when the team distributed an introductory newsletter with accompanying letter and company brochure to houses within 4km of the proposed study area to inform residents about the proposed project. Subsequent newsletters focused delivery on

near neighbours within 2km as recommended by government guidelines.

The wider community was notified about the project via local newspaper coverage and anyone who has asked to be kept informed or to receive newsletters has been provided with this information.

View of the proposed development site



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

A dedicated project website, www.knockshanvowindfarm.ie, also went live. This website contains all project information and updates including newsletters as well as a detailed Fact File and access to the Virtual Tour.

Since the project launched to the local and wider community, our approach has been to focus on those living closest to the site (up to 2km). The CLOs have maintained a presence here to allow for queries to be discussed prior to detailed design work commencing.

In April 2023, CLOs Kevin and Christy hand-delivered Newsletter 2 with an accompanying letter to those who live within 2km of the project study area. This provided an update on surveys and gave the CLOs further opportunity to answer questions raised by local residents and stakeholders and to share information. When people were not at home, a letter with the CLOs’ contact details inviting people to get in touch was put through the letter box.

In July 2023, Newsletter 3 with a cover letter was distributed to those within 2km of the project area to keep local residents and the wider community informed. This provided information on the potential Community Benefit Fund and gave the CLOs another opportunity to share information and answer questions raised.

In October 2023, the project team held an information webinar. This was widely advertised in the local area, on the project website and in the press. The webinar gave community members the opportunity to meet the team, hear more about the project and ask their questions.

Throughout the engagement process, the CLOs have kept interest groups from the wider community and local elected representatives updated. This level of commitment will continue as the project progresses.

Our 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 sensitivities within the project study area with a view to pinpointing suitable areas in which wind turbines may be located. The resulting area is known as the 'developable area'.

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

There were several reviews of the specific locations of turbines during the optimisation of the site layout.

The initial constraints study identified a significant viable area within the overall study area. The initial turbine layout comprised 16 turbines within a larger study area, however the proposed layout of nine turbines was refined following feedback from the project team, landowners, neighbours and the need to ensure sufficient separation distances are maintained for on-site constraints.

The design and layout of the proposed Knockshanvo Wind Farm follows the recommendations set out in the Wind Energy Development Guidelines (WEGs 2006, Department of the Environment, Heritage and Local Government) and Best Practice Guidelines for the Irish Wind Energy Industry (Irish Wind Energy Association, 2008).

The 2006 WEGs are the subject of a targeted review. The Draft Revised Wind Energy Development Guidelines, December 2019 (Draft WEGs 2019) outline proposed changes to the management standards associated with onshore wind energy developments.

Please note, Knockshanvo Wind Farm has been designed to enable it to align with the Draft WEGs 2019.

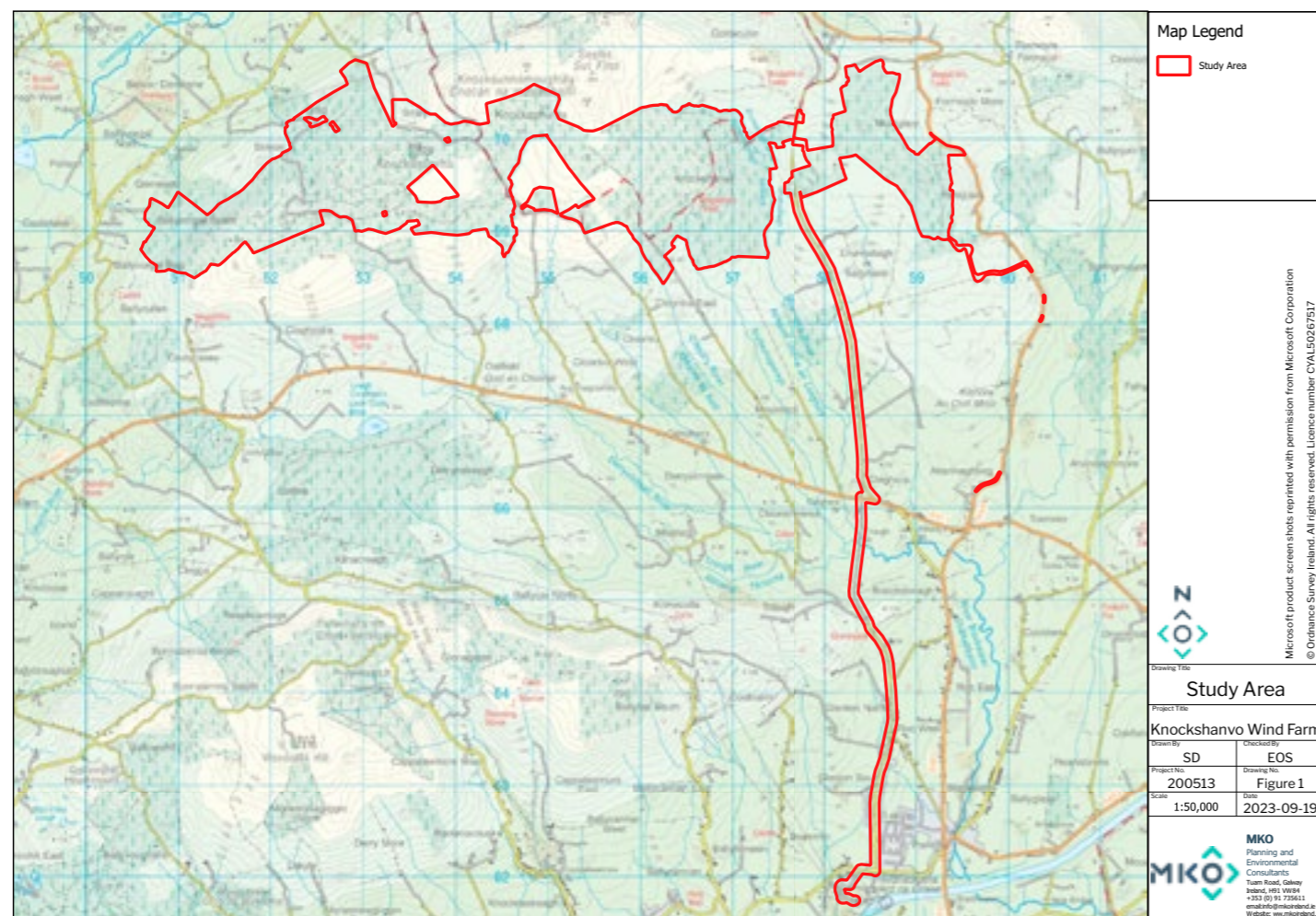
- Designated sensitive views or scenic routes;
- Places of archaeological or cultural heritage significance.

Applying setback buffers

The constraints mapping process involves placing buffers around constraints to identify the areas within which no development works will take place if possible. The size of the buffer zone for each constraint is assigned to comply with Wind Energy Guidelines (WEGs). The following constraints and buffers apply to Knockshanvo Wind Farm:

- Residential dwellings plus a minimum 750 metre buffer (exceeding the 4 x tip height separation distance required in the Draft WEGs 2019);
- Rivers and streams ≈50 metre buffer;
- Recorded archaeological sites and monuments plus 50 metre buffer;
- Biodiversity exclusion zone buffer;
- Telecommunications buffer plus operator-specific buffer;
- Existing wind turbines buffer.

Figure 1 Initial project study area



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;

The size of the proposed wind farm has decreased from 16 turbines in the initial design to nine turbines in the final layout



In the case of Knockshanvo Wind Farm, the setback buffer applied from dwellings is 750 metres. This exceeds the requirements of both the current WEDGs and the draft WEDGs. Figure 2 (below) shows how this 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.

Additionally, setback buffers are applied to existing roads, high voltage electrical lines, telecommunication links, public roads and trails.

Figure 3 (below) shows the setback buffers applied to rivers and streams, biodiversity exclusion zones, telecommunication links and recorded archaeological sites at the proposed Knockshanvo Wind Farm.

There are further constraints associated with landscape and visuals, including the reverse zone of theoretical visibility (ZTV) from viewpoints. 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 turbine visibility from key viewpoints.

Figure 2 Setback buffer from dwellings applied

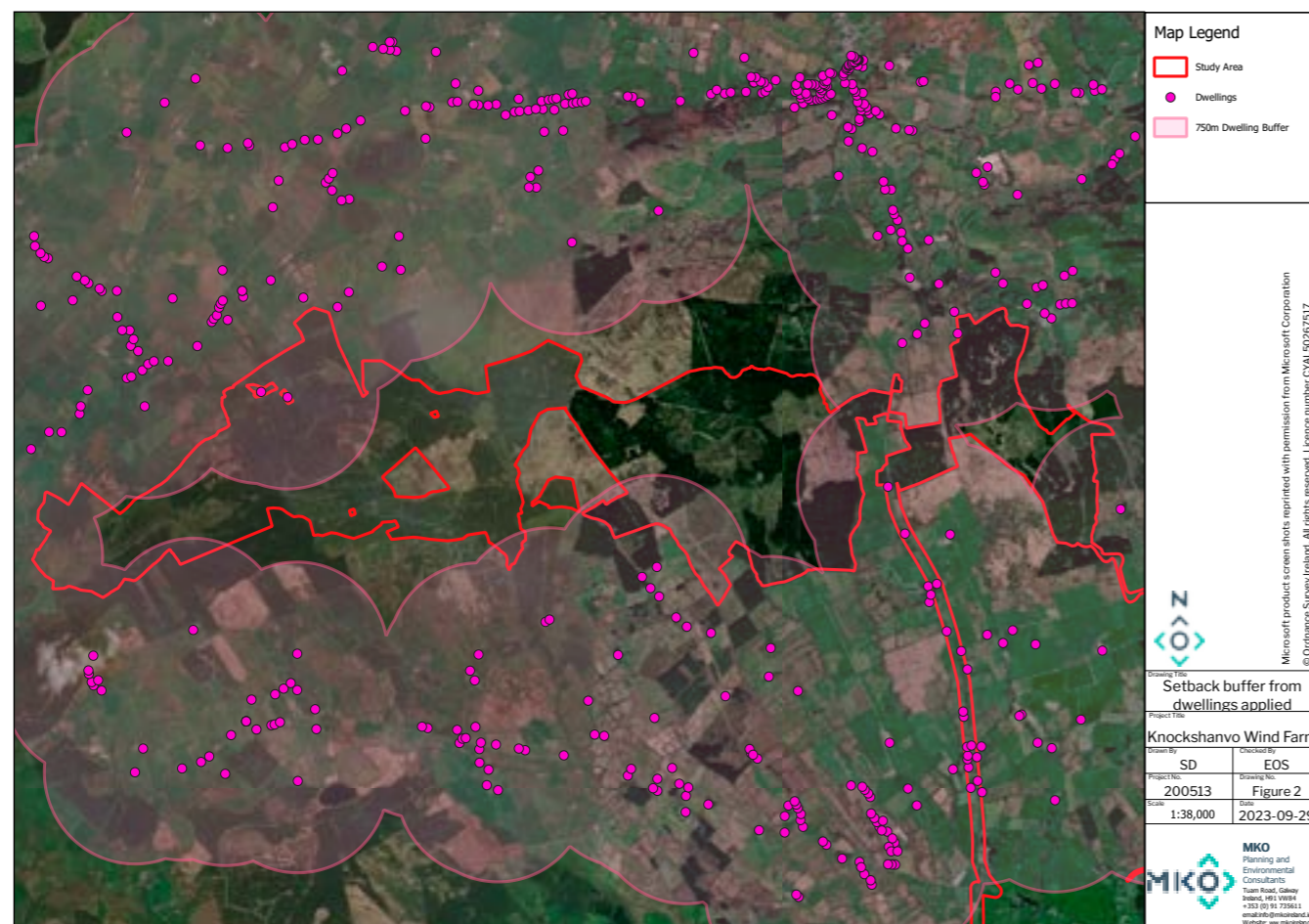
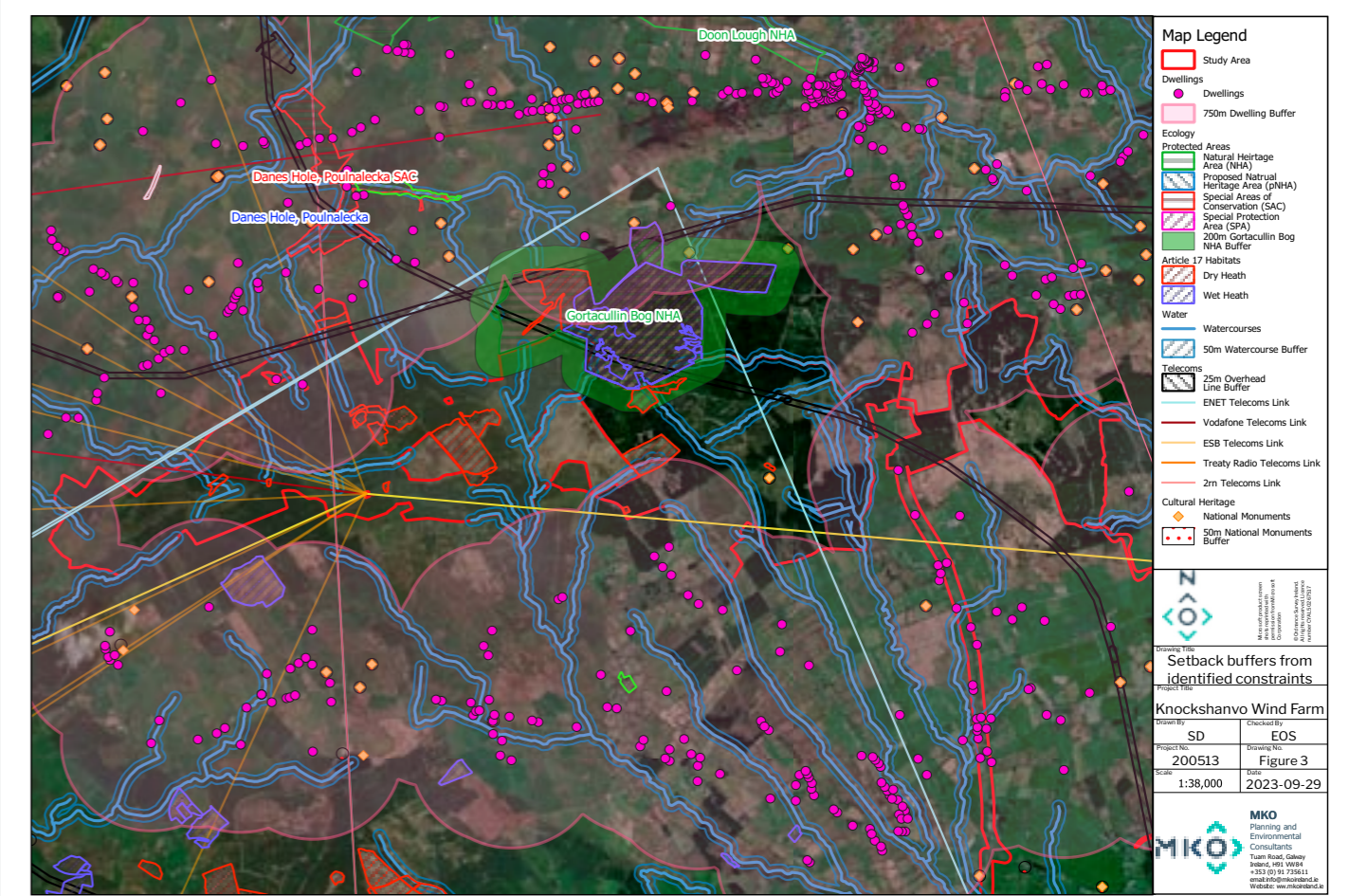


Figure 3 Setback buffers from identified constraints



Mapping the developable area

When all the constraints are layered on top of one another, the true area available for wind energy development begins to become apparent. As you will see, this is significantly smaller than the original study area.

Following the application of all known constraints, the developable area is mapped. Figure 4 (below) shows the area in which wind turbines can now be sited. After placing wind turbines within the developable area, allowing for required spacing between them, the resulting layout forms the first design version of the wind farm (Figure 5, below right).

Other elements of the wind farm design can now commence such as onsite access tracks, crane hardstandings, the onsite substation and temporary compounds.

New constraints are added following more detailed environmental studies, field surveys and consultation, which may change the developable area as the project progresses.

This approach has also been applied to the location of other wind farm infrastructure.

In our Virtual Exhibition, you will find a full suite of photomontage imagery that clearly shows what the wind farm would look like from different viewpoints around the proposed site. This is available at www.knockshanvowindfarm.ie.

The final turbine layout overleaf, Figure 6, is expected to represent the layout that will be submitted for planning permission, any late changes notwithstanding.



Figure 4 Development site study area and potential developable areas

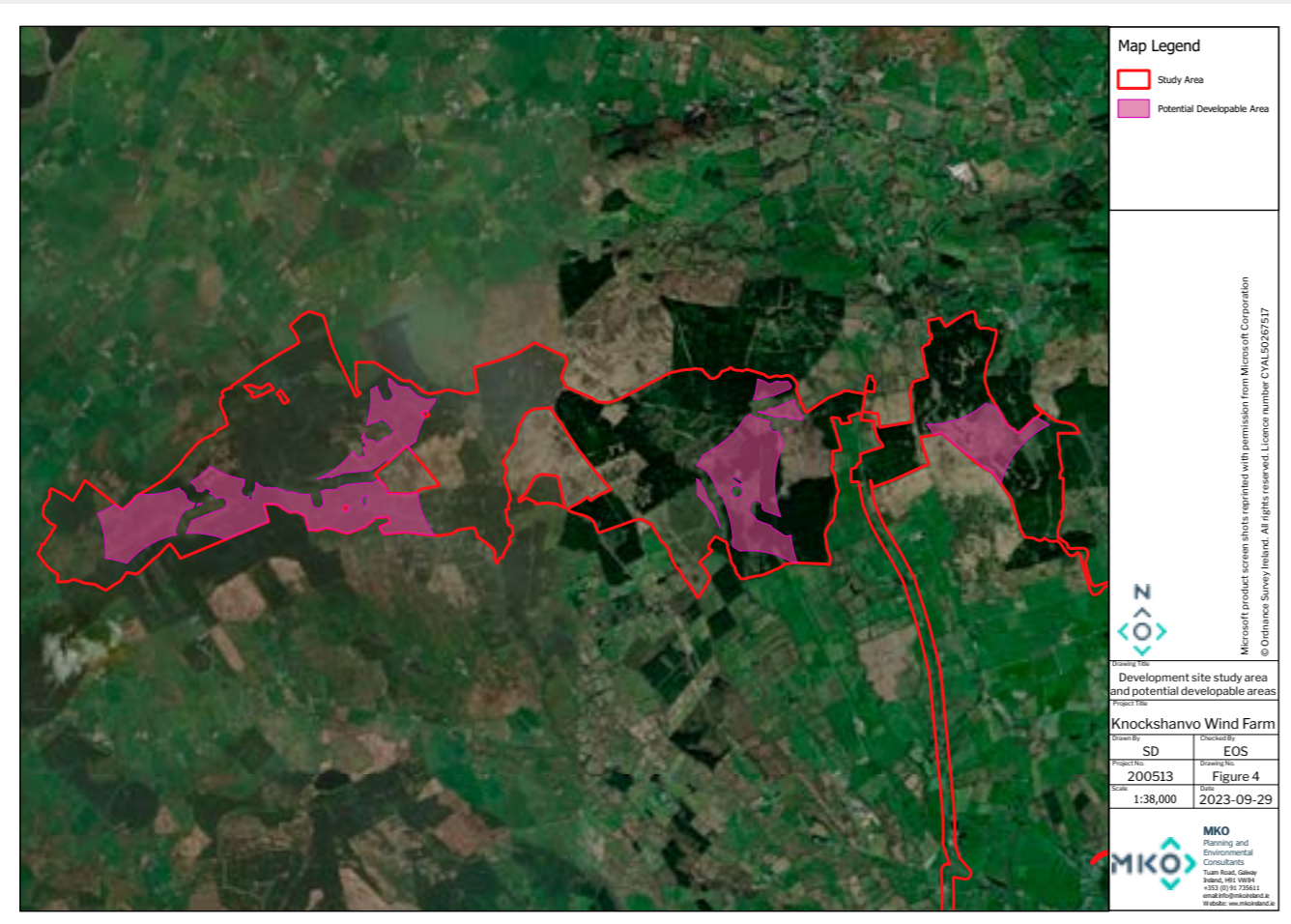
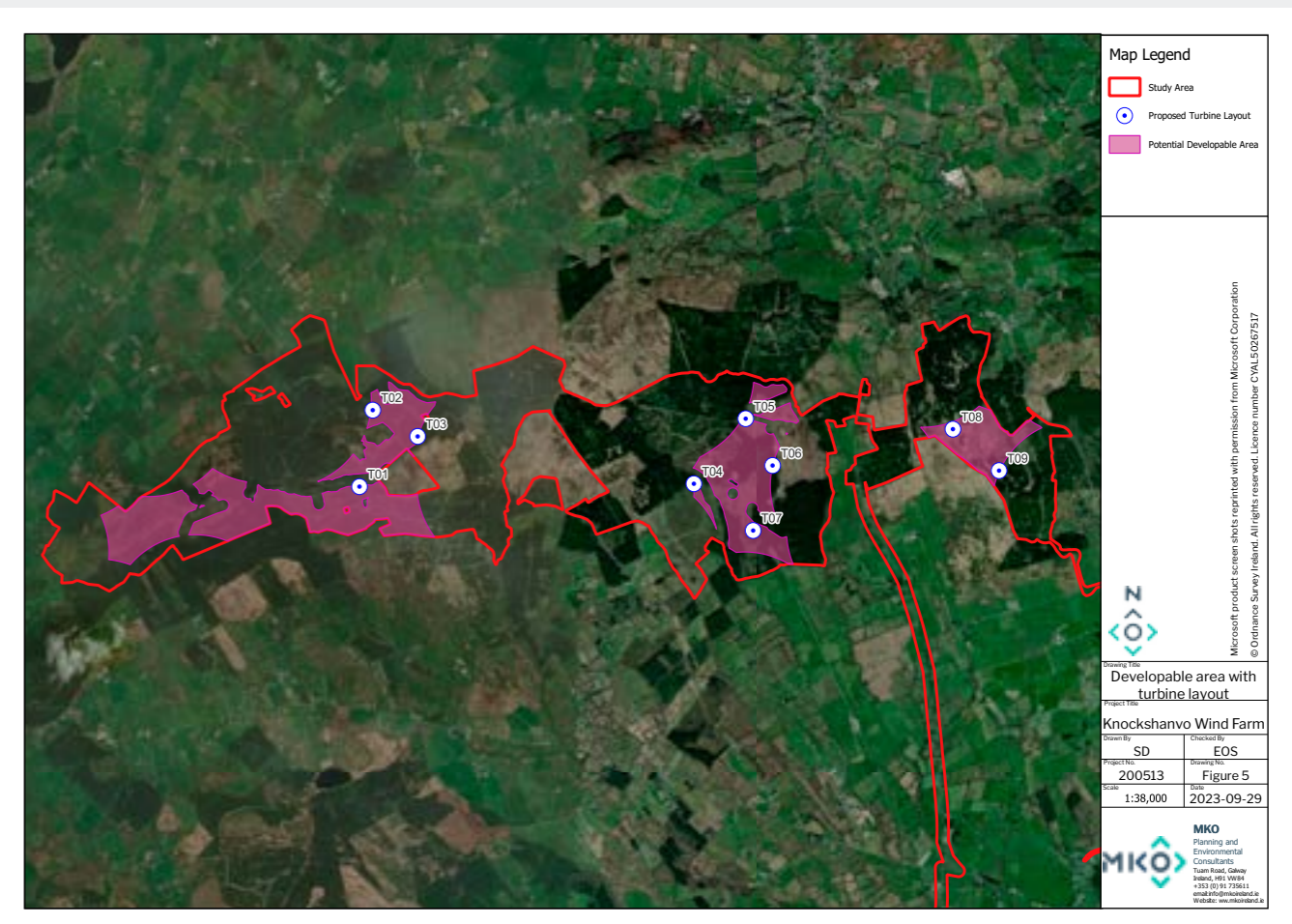


Figure 5 Developable area with turbine layout





Map Legend

- Study Area
- Proposed Turbine Layout

Figure 6
Final Turbine Layout

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Final Turbine Layout

Project Title
Knockshanvo Wind Farm

Drawn By SD	Checked By EOS
Project No. 200513	Drawing No. Figure 6
Scale 1:25,000	Date 2023-09-19

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The proposed development

The proposed project will consist of the following:

- Erection of 9 turbines, each capable of generating 5.7 MW to 7.2 MW, with an overall ground-to-blade tip height of between 179.5 metres and 185 metres. The candidate wind turbines will have a rotor diameter of between 149 metres and 163 metres and a hub height of between 102.5 metres and 110.5 metres.
- Construction of site access roads, crane hardstand areas and turbine foundations.
- Improvement of existing site entrances and local road network.
- Improvements and temporary modifications to existing public road infrastructure to facilitate delivery of abnormal loads and turbine delivery.
- 3 temporary construction compounds with associated temporary site offices, parking and security fencing.
- All associated underground electrical and communications cabling connecting the wind turbines to the substation.
- All works associated with the connection of the wind farm to the national electricity grid, which will be via a 110 kV underground cable connection approximately 8.7km in length, to the existing Ardnacrusha 110 kV GIS Substation. This element of the project will be the subject of a separate planning application.
- Installation of one permanent meteorological mast up to a height of 105 metres.
- Development of five on-site borrow pits.
- Construction of new internal site access roads and upgrade of existing site roads, to include passing bays and all associated drainage.
- Development of a site drainage network.
- Construction of one permanent 110 kV electrical substation.
- Upgrade works on the turbine delivery route from Shannon Foynes Port.
- Ancillary forestry felling to facilitate construction and operation of the development and any on-site forestry replanting.
- Permanent recreation and amenity works, including marked trails, seating areas and associated amenity signage.
- Biodiversity enhancement areas.



View from L3042 in the townland of Drumsillagh or Sallybank (Parker), located approximately 0.8km west from the nearest proposed turbine





Benefits to the Local Community

Knockshanvo Wind Farm has the potential to bring significant positive benefits to local communities. The project will support local employment, it will contribute annual rates to the local authority, and it will provide a Community Benefit Fund in line with the Renewable Electricity Support Scheme (RESS).

RESS is a policy initiative to deliver on the Government's Climate Action Plan. An important feature of RESS is that all projects must establish a Community Benefit Fund to be used for the wider environmental, social and economic wellbeing of the local community.

Those living in closest proximity to the project should be priority beneficiaries and that is why some of the fund is designated for Near Neighbour payments. However, it is important that broader community benefits apply as well.



What will the Community Benefit Fund look like?

On July 7, 2021, Minister Eamon Ryan announced the publication of the Government's 'Good Practice Principles for Community Benefit Funds' under the Renewable Electricity Support Scheme (RESS).

Under RESS, communities will be at the heart of the decision-making process. One particular focus of the funds 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 per 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.

Knockshanvo Wind Farm, if constructed as proposed, has the potential to produce more than 135,000 MWh of clean electricity a year. This means that the project could contribute approximately €270,000 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 around €135,000 per year. Therefore, over the expected lifetime of Knockshanvo Wind Farm, the Community Benefit Fund will be in the order of €6 million.

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



What can the fund be used for?

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

- A minimum of €1,000 shall be paid to each household located within a distance of a 1 kilometre radius from the nearest turbine.
- A minimum of 40% of the funds shall be paid to not-for-profit community enterprises whose primary focus or aim is the promotion of initiatives towards the delivery of the UN Sustainable Development Goals, in particular Goals 4, 7, 11 and 13, including education, energy efficiency, sustainable energy and climate action initiatives.
- A maximum of 10% on administration.
- The balance of the funds shall be spent on initiatives successful in the annual application process, as proposed by clubs and societies and similar not-for profit entities, and in respect of Onshore Wind RESS 1 Projects, on “near neighbour payments” for households located outside a distance of 1 kilometre, but within a distance of 2 kilometres from such RESS 1 Project.



The proposed Knockshanvo Wind Farm would contribute around €6 million to the Community Benefit Fund over its expected operational lifetime



How the fund works

Should Knockshanvo Wind Farm receive a positive planning outcome, the project team will seek expressions of interest from the community to participate in the new Fund Committee for the Knockshanvo Wind Farm Benefit Fund.

This group will make decisions on funding allocations and, with the assistance of an administrator, manage the fund, ensuring transparency and good governance.

You can download the Government's RESS handbook here:
www.knockshanvowindfarm.ie/community/

Environmental benefits

The proposed development will have an installed capacity of between 51.3 MW and 64.8 MW.

Over the 35-year lifetime of the project, between 1.7 million and 2.1 million tonnes of carbon dioxide (CO₂) are expected to be offset compared to traditional electricity generation. The proposed Knockshanvo Wind Farm will have the capacity to provide enough electricity to power between 37,449 and 47,304 homes in Co. Clare annually.

Electricity generated by Knockshanvo Wind Farm would not produce any CO₂ emissions, but carbon emissions are caused by its construction, transport, installation and decommissioning. Studies calculate the carbon payback period of an onshore wind farm at between six and 24 months. An exact figure for Knockshanvo will be provided in the Environmental Impact Assessment Report.



The proposed Knockshanvo Wind Farm will have the capacity to provide enough electricity to power between 37,449 and 47,304 homes in Co. Clare annually



Employment opportunities

The development brings employment opportunities. At peak construction, up to 90 people will be directly employed. Three to four long-term, technical employees are required to run the wind farm. Demand for a wide range of products and services will create indirect employment.

Council rate contributions

Under current guidelines, Clare County Council would receive a contribution of approximately €550,000 in annual rates from Knockshanvo Wind Farm. This will have a positive impact on local infrastructure and amenities such as roads, public lighting, libraries and fire services.





The aim of the proposed recreation plan is to create a safe space for visitors to enjoy the outdoors, stretch their legs and spend quality time together

Recreation Plan

A recreation plan is being prepared at the Knockshanvo location, which will be included in the wind farm planning application, subject to approval. The recreation proposal under development includes:

- Upgraded tracks and trails.
- Links to current walking routes
- A viewing point
- Seated areas
- Associated signage

The aim of the proposed recreation plan is to create a safe space for visitors to enjoy the outdoors, stretch their legs and spend quality time together. The absence of traffic, a variety of gradients and looped trails designed to complement the existing Coillte 12 O'Clock Hills amenity provide the perfect supporting environment to achieve this. If you have feedback or ideas about the proposed recreation plan, please contact us.



The Environmental Impact Assessment Report

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

- Chapter 1: Introduction
- Chapter 2: Background to the Proposed Development
- Chapter 3: Consideration of Reasonable Alternatives
- Chapter 4: Description of the Proposed Development
- Chapter 5: Population and Human Health
- Chapter 6: Biodiversity
- Chapter 7: Ornithology
- Chapter 8: Land, Soils and Geology
- Chapter 9: Hydrology and Hydrogeology
- Chapter 10: Air
- Chapter 11: Climate
- Chapter 12: Noise and Vibration
- Chapter 13: Landscape and Visual
- Chapter 14: Cultural Heritage
- Chapter 15: Material Assets (including Traffic and Transport, Telecommunications, Aviation and Utilities)
- Chapter 16: Major Accidents and Natural Disasters
- Chapter 17: Interaction of the Foregoing
- Chapter 18: Schedule of mitigation & monitoring

Please find an introduction to some of the EIAR chapters that may be of interest.

More information on each chapter 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. The following field studies are progressing well:

Biodiversity

Ecological site walkover surveys were carried out in July, August and September 2021, along with further surveys in September 2022, and June and August of 2023. Site surveys have consisted of bat surveys, aquatic surveys, non-volant mammal surveys and habitat surveys. A summary of habitats on site were mapped through desktop mapping studies and the site walkovers. Habitat mapping was undertaken with regard to best practice guidance and the presence or signs of birds, mammals, amphibians and reptiles were noted.

The majority of the Knockshanvo site comprises coniferous forestry plantation, which has been targeted for the siting of proposed turbines and access roads. Intact areas of peatland have been avoided and will be further investigated for potential ecological and biodiversity improvements.

The proposed development will be designed to avoid ecologically sensitive areas and further habitat survey and condition assessments will be completed to inform the project design.



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



Ornithology

It is recommended that bird surveys are conducted for a period of two full breeding seasons on wind farm sites. Ornithological surveys at the Knockshanvo site have been carried out from April 2018 and are ongoing. Nine survey types continue and consist of the following:

- Breeding raptor survey
- Breeding walkover survey
- Breeding woodcock survey
- Hen harrier nest visit
- Hen harrier roost survey
- Red grouse survey
- Vantage point survey
- Waterfowl survey
- Winter walkover survey



View of the Knockshanvo site

Geology and Soils

Fehily Timoney & Co has undertaken a robust geotechnical and peat stability assessment of the proposed Knockshanvo site, which informed the design process including the siting of all proposed main infrastructure and drainage control measures.

The geology of the proposed site comprises peat and silty clay. In accordance with planning guidelines, where peat of more than 0.5 metre thickness is present on a proposed wind farm development, a peat stability assessment is required.

A walkover, including intrusive peat depth probing, trial pits, desk study, stability analysis and risk assessment was carried out to assess the susceptibility of the site to peat failure.

The assessment involved 569 peat depth readings taken between September 2021 and August 2023. Recorded peat depth ranged from 0.0 to 3.9 metres with an average of 0.55 metres. The average peat depth at any of the proposed turbine locations is 0.4 metres.



The findings, which also included a stability analysis at approximately 240 locations, show that the site has an acceptable margin of safety and a low risk of peat failure, which makes it suitable for the proposed wind farm project. The findings include recommendations and control measures for construction work in peat lands to ensure that all works adhere to an acceptable standard of safety.

Noise

When considering a wind farm development, the potential noise and vibration effects on the surroundings must be considered for each of two distinct stages: the short-term construction phase and the longer-term operational phases.

AWN Consulting Limited were commissioned to conduct a noise and vibration impact assessment on the proposed development. Specialists surveyed the existing noise climate at locations representative of the nearest noise sensitive properties and typical background noise levels for day and night periods at various wind speeds.

Noise and vibration impact assessments are being prepared for the construction, operational and decommissioning phases of the proposed Knockshanvo Wind Farm to the nearest noise sensitive locations.



A noise monitor being installed near the site study area

The majority of the Knockshanvo site comprises coniferous forestry plantation, which has been targeted for the siting of proposed turbines and access roads



Archaeology & Cultural Heritage

Cultural Heritage includes archaeology, architectural heritage and any other tangible assets. The assessment is based on a desktop review of available Cultural Heritage data and a comprehensive programme of field walking of the EIAR study area.

The findings show that there are no National Monuments in State Care, Protected Structures or National Inventory of Architectural Heritage structures within the site boundary. There is one recorded monument, CL044-068, a megalithic tomb, located within the boundary, with 187 recorded monuments within 5km of the nearest proposed turbine.

No items of archaeological potential were noted during site inspections. A ruinous stone structure was noted, but not in the immediate vicinity of any proposed infrastructure. It is shown on the 2nd edition OS map so it is likely to be late 19th or early 20th century in date.



Landscape & Visual

The landscape surrounding the proposed Knockshanvo Wind Farm is generally a flat working agricultural landscape, with various hills and mountains interspersed to the south and east. The agricultural landscape to the north and west of the site is interspersed with small loughs and Lough Derg lies to the northeast of the site.

The proposed turbines are located in the Slieve Bernagh Uplands Landscape Character Area (LCA), which is characterised by isolated, remote and expansive areas with long views across surrounding landscape to Broadford Hills, Lough Derg and lower drumlin.

The Clare County Development Plan 2023-2029 zones the proposed site as a 'Strategic Area' and as 'Acceptable in Principle' for wind energy development, and further classifies the sensitivity to wind farm developments of the Slieve Bernagh LCA as Medium to Low.

In terms of visual impact, despite the site's elevation, a large setback distance is achieved in relation to surrounding visual receptors, including the siting of turbines in proximity to residential dwellings.

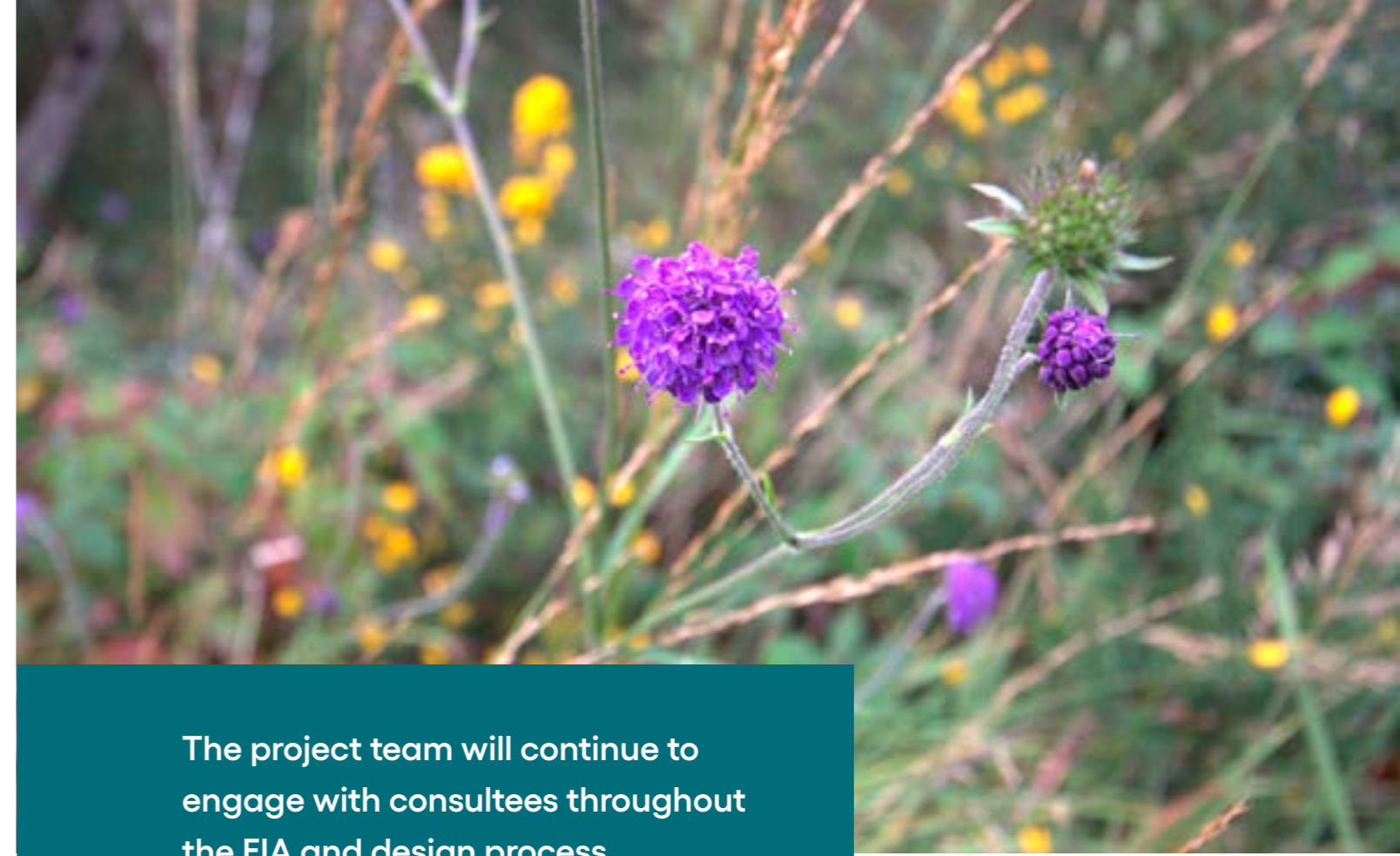
There are a limited number of instances where the proposed turbines are viewed in their entirety, with screening of one or more clusters of turbines commonly occurring thanks to the undulating topography of the site. The careful siting of turbines in this regard helps to ensure that visual effects are minimised for local receptors. This includes Broadford and Sixmilebridge, where limited views of the turbines can be seen.

There are also large parts of the surrounding landscape where, as a result of large topographical features to the northeast and southwest, there will be no views of the proposed turbines. This is particularly notable from Limerick City, and from the area around Lough Derg where limited visibility of the proposed turbines, or no visibility at all, will occur.

Telecommunications, Mobile and Television

As part of the EIAR scoping and consultation exercise, MKO contacted the relevant national and regional broadcasters, fixed and mobile telephone operators, aviation authorities and other relevant consultees.

Consultation was also carried out with ComReg to identify any other additional licensed operators in the vicinity of the proposed development to be contacted, who may not have been on the list of main operators.



The project team will continue to engage with consultees throughout the EIA and design process

Telecoms consultant Ai Bridges is in the process of refining the constraints conditions arising from existing telecommunications connections and Shannon Airport. The wind farm layout is designed to avoid impacts to these links.

Environmental Impact Assessment Scoping and Consultation

An Environmental Impact Assessment scoping is underway and will be included with the application documents identify to all the factors that need to be considered in the EIAR submitted with a planning application.

More than 50 organisations are being consulted including Clare County Council and the Environmental Protection Agency. The project team will continue to engage with consultees throughout the EIA and design process.



The Planning Process

Two respective planning applications for the wind farm and the grid connection will be submitted directly to An Bord Pleanála by the project company, FuturEnergy Knockshanvo DAC. 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 Bord Pleanála and the local planning authority, Clare County Council, to discuss the project. The planning application will be supported by an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS).

When the EIAR is complete, FuturEnergy Ireland will be ready to submit a planning

application to An Bord Pleanála for the proposed Knockshanvo Wind Farm. It is anticipated that this will be submitted in late 2023/early 2024.

The intention to submit the application will be advertised in local newspapers and notices will be erected at the site.

When all documentation has been received and validated by An Bord Pleanála, the full documentation will be uploaded and available to view at www.knockshanvoplanning.ie.

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

How can you engage with the planning process?

There is a useful Frequently Asked Questions section on An Bord 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 local road in the townland of Snaty (Cooper), located approximately 1.1km north of the nearest proposed turbine



Next Steps

- **Provide your feedback**

Our Community Liaison Officers are available to speak one-to-one with homeowners in the area. We actively encourage you contact them with any queries or questions.

- **Community Engagement Clinics**

Meet Meet the team, learn more about the project and ask your questions:

Wednesday November 22, 12pm-8pm,
and Thursday November 23, 10am-4pm

Castle Oaks House Hotel, Stradbally,
Castleconnell, Co. Limerick, V94 EH94.

If you do not have transport, please contact us and we will arrange transport to and from the venue.

- **Planning submissions**

FuturEnergy Ireland will submit two planning applications to An Bord Pleanála; one for the proposed Knockshanvo Wind Farm and another for the grid connection. It is anticipated that these will be submitted in late 2023 / early 2024.



Meet the team at the Knockshanvo Community Clinics on
**Wednesday November 22, 12pm-8pm,
and Thursday November 23, 10am-4pm**
at **Castle Oaks Hotel, Castleconnell**

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 Kevin Donnellan on 087 431 5976 or Christy O'Dea on 087 395 8867.

E-mail: knockshanvo@futureenergyireland.ie

Post: Knockshanvo Wind Farm
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