

# 1. Introduction

Welcome and thank you for visiting this public exhibition for the revised Larbrax Wind Farm. Through this exhibition you can learn about Ørsted, find out what the revised Larbrax Wind Farm proposals are, the associated community benefit opportunities, and provide your valued feedback.

## About the Project

The revised Larbrax Wind Farm is a revision of the consented Larbrax Wind Farm, an onshore wind farm on the Rhins Peninsula.

Between 2013-2016, a proposal for Larbrax Wind Farm was consulted on and a planning application was submitted to Dumfries and Galloway Council. The planning permission was granted on appeal by the Scottish Government in 2016. From 2016-2023, a number of efforts have been made to make the project both technically and commercially viable, including discussions with turbine suppliers and Scottish Power with regards to the procurement of the consented 100m tip turbines and the proposed grid connection. The culmination of this work behind the scenes is the revised proposal for Larbrax Wind Farm, which will significantly improve the efficiency and buildability of the project.

Ørsted is now progressing this revised proposal for Larbrax Wind Farm which addresses technical and commercial barriers and, if approved, would make a valuable contribution to Scotland's renewable energy and climate change goals, while returning community and economic benefits to the local area.

## The revised proposal consists of:

- Up to five wind turbines;
- Each up to 149.9m in height;
- Generating over 20MW of clean, green energy;
- Delivering £5,000 per MW of installed wind energy capacity, equating to ~£120,000 in annual community benefit for the local area.

## Working with You

This is the first of two rounds of public consultation which we will undertake before preparing the final planning application for the revised Larbrax Wind Farm. Your feedback is vital to our approach to the project, and we would encourage you to fill in the provided questionnaire when you have viewed the exhibition materials. Members of our team are also on-hand to answer any questions you may have.

The information presented in this exhibition can also be found online at: [www.larbraxwindfarm.co.uk](http://www.larbraxwindfarm.co.uk).

You can contact our team at any time:

E: [larbrax@orsted.com](mailto:larbrax@orsted.com)

T: 0131 243 9100

P: Ørsted, 2nd Floor, 2 Lochrin Square, 96 Fountainbridge, Edinburgh EH3 9QA

Please note that an application has not yet been submitted, therefore, comments made in response to this consultation are not representations to Dumfries and Galloway Council but to Ørsted as the applicant. Members of the public will have the opportunity to submit comments to the council when the application has been submitted (see Board 14b).



# 2. About Us

Ørsted is one of the world's most sustainable energy companies and is helping Scotland and the UK deliver on their net-zero ambitions while achieving all the economic, social and environmental benefits that come with that. Headquartered in Denmark, Ørsted is active across Europe, the USA and Asia. Since 2018, Ørsted has expanded significantly and now has a portfolio of 8.2 Gigawatts (GW) of operating and under construction capacity across wind, solar, and energy storage. Our target is to have 17.5 GW of installed onshore wind, solar, and storage capacity across our markets by 2030. In June 2021, Ørsted acquired Brookfield Renewable UK (BRUK), which subsequently was re-branded to Ørsted Onshore UK Ltd.

Already the global leader of offshore wind, we are expanding our onshore wind portfolio.

Ørsted has an established track record in Scotland through our existing and consented onshore wind farms:

- Kennoxhead Wind Farm Cluster in South Lanarkshire - Phase 1, consisting of 13 turbines (176.5 m in height) with a generating capacity of 62.4 megawatts (MW) is currently operational.
- Phase 2, consisting of 22 turbines (up to 220 m in height) and a generating capacity of up to 112 MW, is consented.

We are developing new energy systems for the future, building skills and creating jobs, all whilst ensuring positive impacts on nature. You can read more about our proposed community benefits on Board 7.



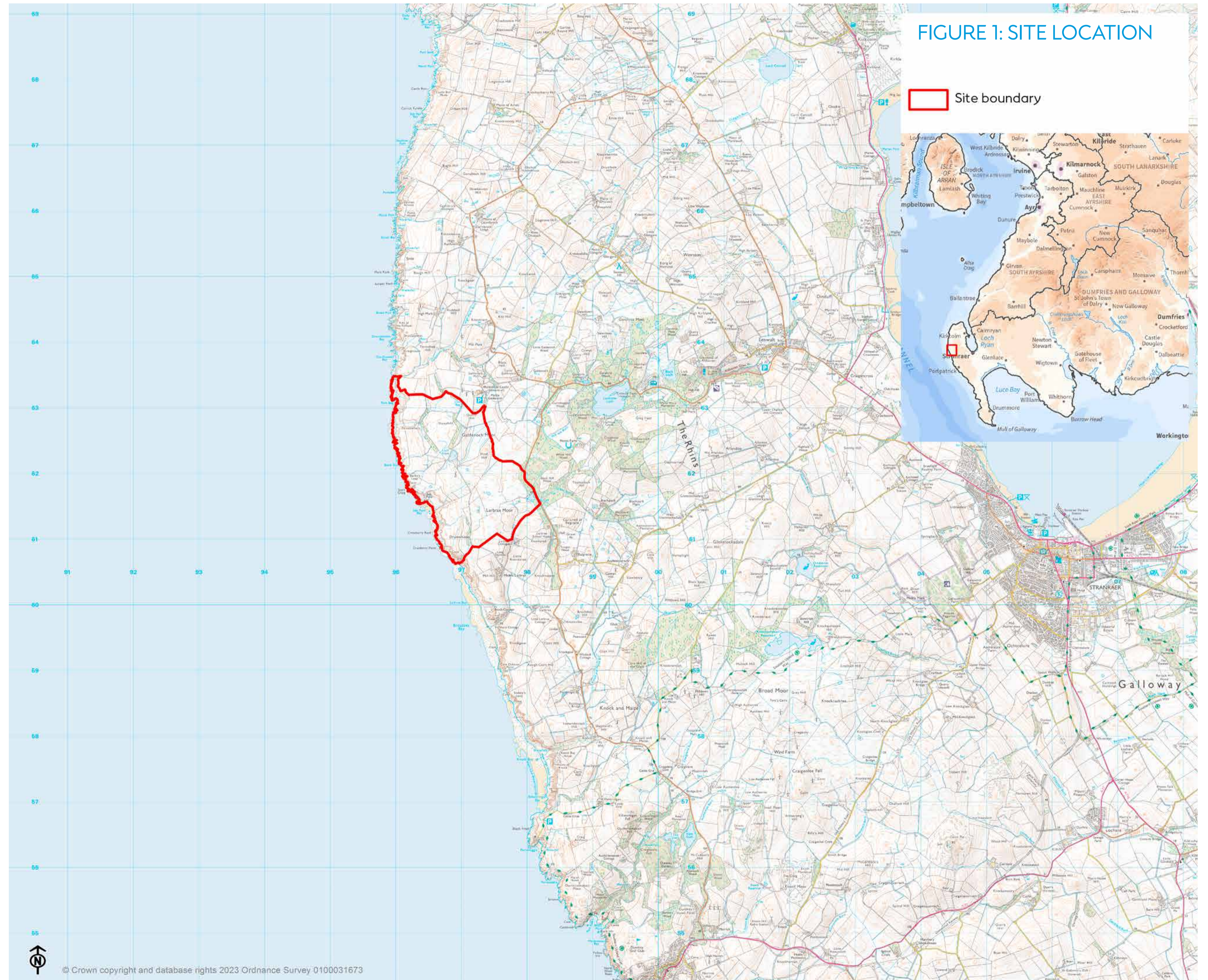


# 3. Site Context

## Site Location

The revised Larbrax Wind Farm is located approximately 9 km west of Stranraer in Dumfries and Galloway, and is a re-design of the consented Larbrax Wind Farm for which planning permission was granted on appeal in 2016. The proposed site lies in a remote area in the western edge of the Rhins Peninsula. The site is relatively low-lying, sloping from east to west towards the coast. The highest point of the site is Hind Hill on Goldenoch Moor at around 82m, as well as an unnamed hill of 83m on Larbrax Moor.

Land within the site is mainly used for grazing livestock with some small woodland plantations being used as shelterbelts. Properties within the surrounding area are mainly single rural dwellings, farmhouses and holiday cottages which are scattered throughout the area.





# 4. Proposals

## Proposals

The current planning permission for Larbrax Wind Farm allows for eight turbines each of up to 100 m in height. However, given advancements in turbine technology the consented wind farm is unlikely to be commercially viable. As the site is very windy it is the perfect spot to install a wind farm, so we are now seeking to revise the Larbrax Wind Farm proposal in order to optimise the potential energy output from the site and retain a commercially viable scheme whilst using fewer and much more efficient, but taller turbines.

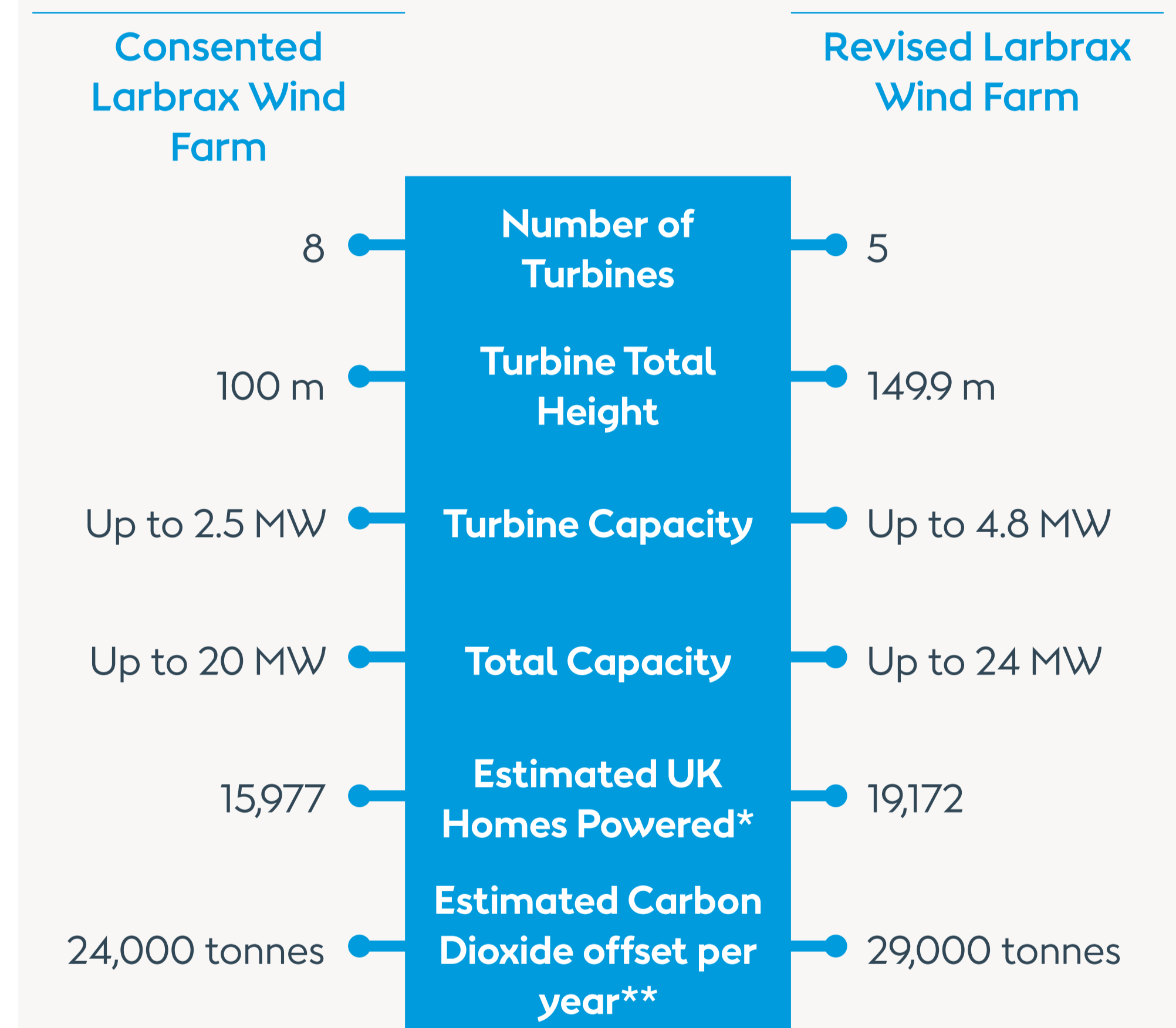
We will be applying to Dumfries and Galloway Council for planning permission to construct and operate the revised Larbrax Wind Farm.

### The current proposals comprise:

- Up to five wind turbines, each with a maximum height of up to 149.9 m;
- Foundations supporting each wind turbine;
- Associated crane hardstandings at each turbine location;
- A network of onsite access tracks and associated watercourse crossings;
- A network of underground cables to connect the turbines to the onsite substation;
- A control building and electrical substation;
- An Energy Storage System;
- A permanent anemometer mast for wind monitoring, including associated foundations and hardstandings;
- Temporary construction compound(s); and
- Temporary on-site borrow pits (quarries) for winning stone during construction.

It is Ørsted's intention to use the consented Larbrax Wind Farm infrastructure layout as much as possible. The infrastructure layout will, however, be dictated by the final positions of the turbines, the larger turbine hardstandings as well as environmental and technical constraints.

## Comparison of Homes Powered and CO<sub>2</sub> Offset Per Year



\*Based on the latest Department for Energy Security and Net Zero (DESNZ) and Digest of UK Energy Statistics (DUKES) figures, which provide an average UK annual household electrical consumption of 3,509 KWh and indicative 'all wind' capacity factor of 32%. In reality the larger turbines will have an increased capacity factor.

\*\*Uses DESNZ "all fossil fuels" emissions statistic of 446 tonnes of carbon dioxide per GWh of electricity supplied in the Digest of UK Energy Statistics (July 2023) Table 5.14



# 5. Current Turbine Layout and Consented Layout

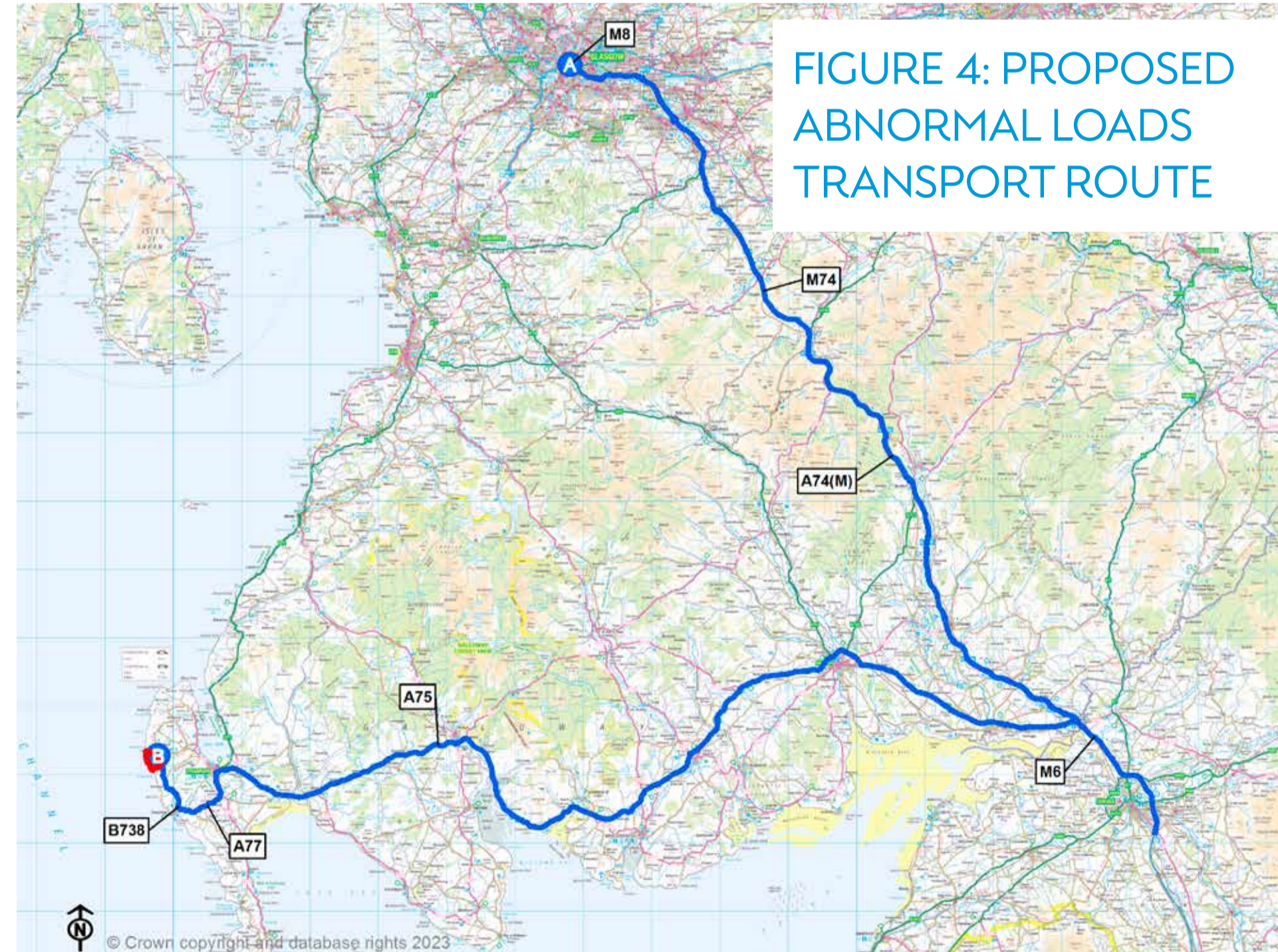




# 6. Access, Programme and Preservation and Enhancement of Nature

## Access

The site will be accessed from a new junction with the B738, located on the eastern part of the site. Traffic will then drive west into the site. General construction vehicles will come from the north via the A77 and the east via the A75. Vehicles transporting turbine components are expected to travel south from King George V Docks in Glasgow via the M8, M74, A74(M) and M6 (existing at Junction 42) then back north on M6 (existing at A74(M) junction 22 at Gretna Green). Vehicles will then travel west via the A75 to Stranraer, south along the A77 to Portpatrick then north on the B738 to the site entrance. Construction materials will be sourced from local quarries where this cannot be fully sourced from borrow pits within the site.



A Construction Traffic Management Plan (CTMP), Staff Travel Plan and Abnormal Loads Traffic Management Plan will be agreed and implemented in consultation with the local roads authority to manage traffic movements and minimise effects on local communities during construction.

## Construction

It is estimated that it will take approximately 12 months to construct the revised Larbrax Wind Farm. Construction works will include the following main activities, most of which will be undertaken concurrently to reduce disruption to those living in the local area:

- Working of borrow pits (small quarry);
- Construction of temporary construction compound(s);
- Construction/upgrading of site access tracks, site access junction on B738, passing places and any watercourse crossings;
- Construction of culverts under tracks to facilitate drainage and maintain existing hydrology;
- Construction of turbine foundations;
- Construction of onsite control building, substation and energy storage system compound
- Excavation of trenches and cable laying adjacent to site tracks;
- Delivery and erection of wind turbines and energy storage batteries;
- Construction of a network of underground cables to connect turbines to the onsite substation;
- Commissioning of wind farm (assuming grid connection is in place);
- Restoration of temporary construction areas; and
- Implementation of habitat management and enhancement proposals.

## Operation

Planning permission will be sought for an operational period of 35 years. During the operational phase it is expected that there will be very little traffic generated by the project, and this will be limited to general maintenance visits. Towards the end of the operational period, a decision will be made as to whether to refurbish, remove, or replace the turbines. If refurbished or replaced, this would be subject to a new planning application.

## Nature Preservation and Enhancement

We are investigating opportunities for habitat restoration and enhancements to help compensate for habitat loss as a result of the revised Larbrax Wind Farm. These measures may use areas of the site which are not being developed. The aim will be to achieve a biodiversity net gain within the site (i.e. leave the current nature resource on the site in a better state than it was before the revised Larbrax Wind Farm). Working with our ecology and peatland specialists, we will prepare an Outline Biodiversity Enhancement and Management Plan (OBEMP) for the site and this will accompany the planning application. Measures proposed will be agreed with Dumfries and Galloway Council and NatureScot as statutory consultees before they are implemented should the application be approved.





# 7. Community Benefits

Ørsted is dedicated to being an active partner in the communities where we develop, build, operate and own green energy assets such as onshore wind farms. In Scotland, we offer a community benefit programme committed to supporting communities close to our wind farm sites. We're keen to support local community projects wherever we can.

## Community Benefit

Throughout the operational lifetime of the revised Larbrax Wind Farm, Ørsted will pay £5,000 per installed MW into a community development fund - equating to approximately £120,000 per year or £4.2 million over the anticipated 35-year lifetime of the project.

The final value will be subject to the chosen turbine capacity rating. We currently assume that the total capacity of the turbines will be 24 MW.

We are committed to consulting and engaging with the people who live and work near our projects to ensure that community benefit funds support the projects and initiatives that are of most value to local people, such as:

- Local energy bill discount schemes;
- Skills development and training;
- Digital connectivity improvements;
- Linkages with local schools and colleges on STEM subjects;
- Upgrades to local amenities such as community halls and buildings;
- Local facilities such as football pitches and sport centres;
- Support and sponsorship of local groups and projects;
- Accessibility improvements, recreational routes and signposting.

## Community Ownership

Ørsted also offers local communities surrounding our onshore wind projects the opportunity to own part of the project.

By owning a part of Scotland's green energy supply, local communities have the chance to benefit directly from the long-term economic benefits onshore wind energy brings.

If the community were eager to explore community ownership options, Ørsted would offer the opportunity to purchase a stake in the revised Larbrax Wind Farm.

## Education and Skills

Skills and training are a vital part of Scotland's transition to a green economy that is powered by renewable energy, and we are determined to support skills development and local job opportunities as we develop Larbrax Wind Farm.

In 2014, the Larbrax Wind Farm Skills Fund was announced as part of the original Larbrax Wind Farm, which we wish to continue. Ørsted will look to work with with Dumfries and Galloway College to explore additional educational opportunities in the energy sector – helping to reinforce the College's existing offering in Stranraer and bridging local skills gaps.



# 8. Climate and Nature Emergency

The impacts of climate change are widely recognised as being one of the greatest global economic, environmental and social challenges facing the world today. A major cause of climate change is a rise in the concentration and volume of greenhouse gases in the atmosphere, a significant contributor to which, is the use of fossil fuels to generate electricity, provide heat and to fuel transport.



The Scottish Government has declared a climate emergency and a range of stretching targets, including:

- To achieve net zero emissions by 2045<sup>1</sup>, five years ahead of the UK Government, and an interim 2030 target to reduce greenhouse gas emissions by 75% according to 1990 levels;
- To produce 50% of 'all energy' from renewables by 2030 - in 2021 only 24% of total energy needs were supplied by renewables<sup>2</sup>;
- An ambition for a minimum of 20 Gigawatts (GW) of onshore wind capacity to be installed by 2030 - Scotland currently has an installed onshore capacity of 9.3 GW<sup>3</sup> so meeting the minimum target will require increasing Scotland's installed capacity by more than 100% in only seven years.

Locally, in June 2019, Dumfries and Galloway Council declared the climate emergency to respond urgently to climate change and transition to a carbon neutral region<sup>4</sup>. Dumfries and Galloway Council has published a 12-point plan outlining actions to achieve net-zero greenhouse gas emission by 2045 and protect the biodiversity in the region<sup>2</sup>.

Onshore wind is now one of the cheapest forms of electricity and will therefore continue to play an important role in realising the Scottish Government's climate change targets. The revised Larbrax Wind Farm will generate electricity from a renewable source of energy, offsetting the need for electricity generation from fossil fuels and helping Scotland move towards a decarbonised energy system. The electricity that will be produced will result in a saving in emissions of carbon dioxide (CO<sub>2</sub>) with associated environmental benefit (see Board 4).

Onshore wind also has an important role to play in tackling the biodiversity crisis. The Scottish Government's Onshore Wind Policy Statement and recently-adopted National Planning Framework (NPF4) require developers of onshore wind projects to further contribute to biodiversity restoration and enhancement ambitions, including the target of halting biodiversity loss by 2030 and substantially restoring biodiversity by 2045<sup>5</sup>. **Board 6** sets out our commitment to enhancing nature within the revised Larbrax Wind Farm site.

<sup>1</sup> Climate Change (Emissions Reduction Targets) (Scotland) Act 2019

<sup>2</sup> Scottish Government, 2021, 'Scottish Energy Statistics Hub – Share of Renewable Energy in Gross Final Consumption. Available [online] at: <https://scotland.shinyapps.io/Energy/?Section=WholeSystem&Chart=RenEnTgt>

<sup>3</sup> Scottish Renewables (2023), 'Statistics – Energy Consumption by Sector (Chart 3)', Available [online] at: <https://www.scottishrenewables.com/our-industry/statistics>

<sup>4</sup> Dumfries and Galloway Council (2019), 'Climate Emergency'. Available [online] at: <https://www.dumgal.gov.uk/article/21773/Climate-Emergency>

<sup>5</sup> Scottish Government (September 2023) 'Tackling the Nature Emergency – Scottish Biodiversity Strategy to 2045'. Available [online] at: <https://www.gov.scot/publications/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland-2/documents/>



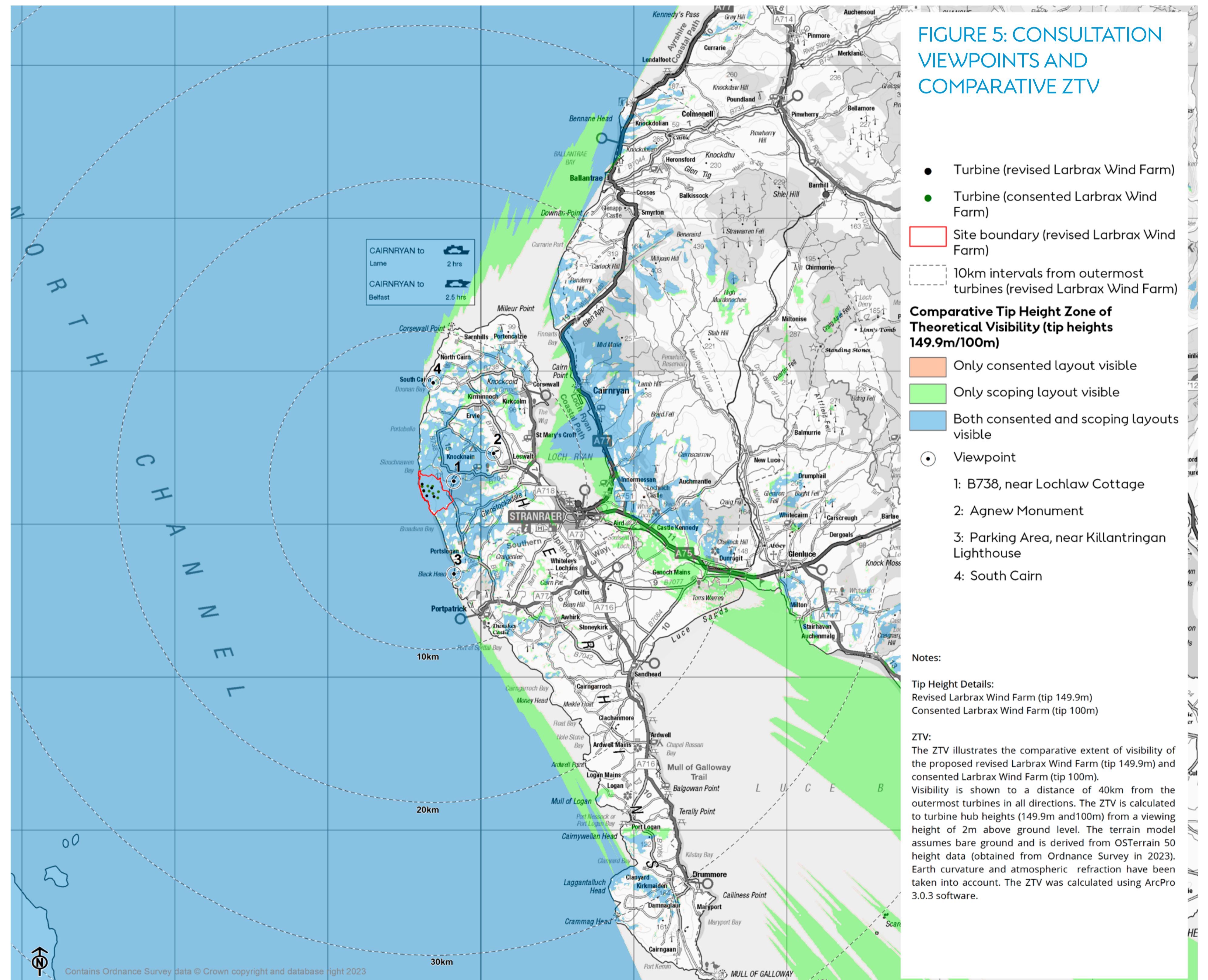
# 9. What the Project Could Look Like

## Landscape Viewpoints

Experienced landscape consultants have been tasked with helping us create a carefully designed wind farm to be compatible with the surrounding landscape. An objective approach, which follows recognised guidance methods, will be used to minimise any potential effects on the surrounding landscape and visual resource, and on the people who experience these views. A key design objective will be to consider the landscape and visual issues associated with the consented Larbrax Wind Farm and, where possible, seek to improve or minimise any changes to these impacts through the revised design.

A comprehensive landscape and visual assessment is being prepared, which includes visualisations (photos with turbines superimposed) from viewpoints around the project. These visualisations will inform the ongoing design of the turbine layout. A selection of visualisations from representative viewpoints are on display as part of this exhibition. We have prepared visualisations from the viewpoints shown on **Figure 5** below.

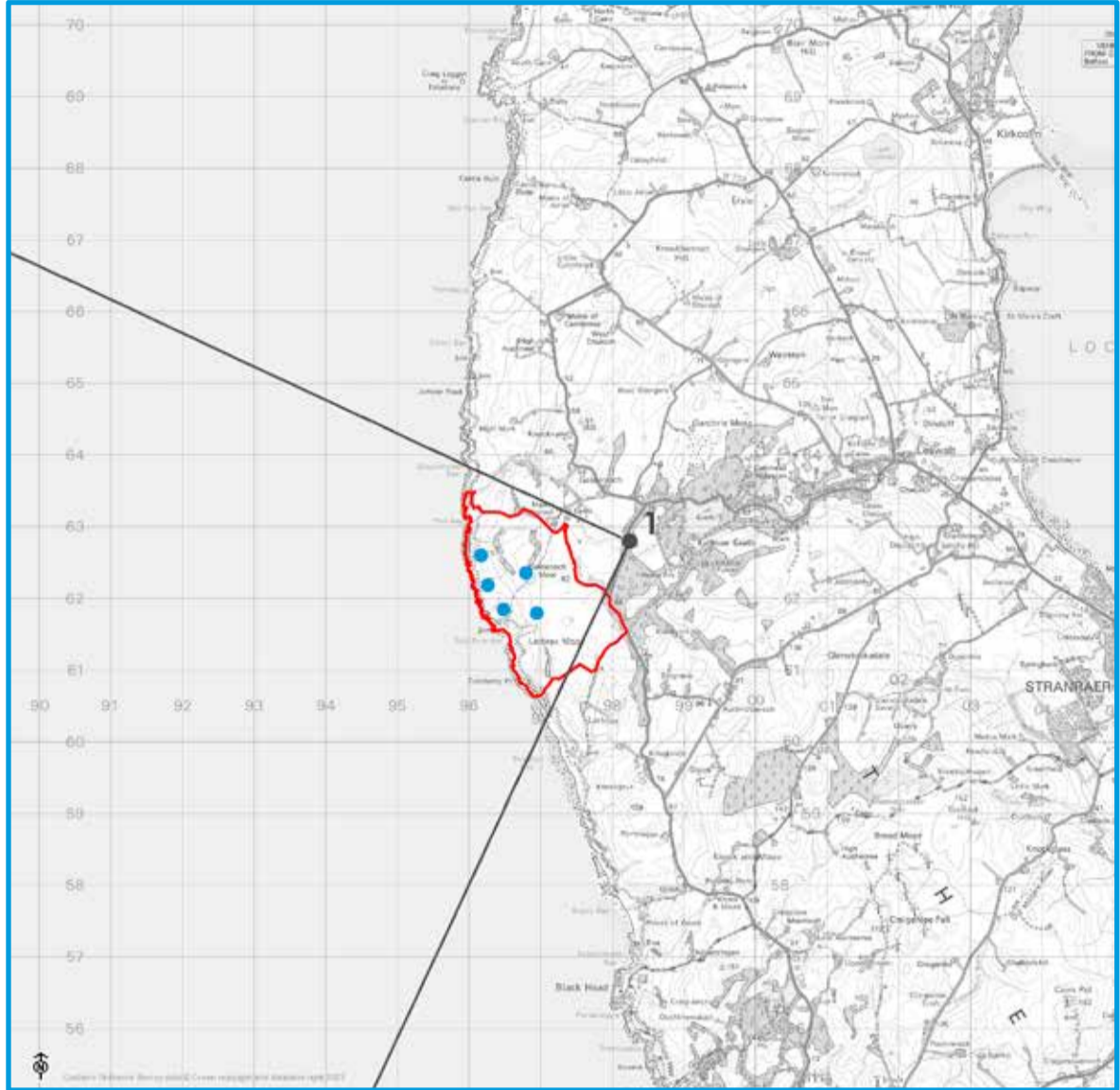
**Figure 5** also shows a comparative Zone of Theoretical Visibility (ZTV) map which illustrates the maximum extent to the difference in visibility between the consented Larbrax Wind Farm and the revised Larbrax Wind Farm (assuming no screening from trees, buildings etc).





# 10. Viewpoint 1: B738, near Lochlaw Cottage

Location (OS Grid reference): 198228 E 562800 N  
Direction of view: 250°  
Horizontal field of view: 90° (cylindrical projection)



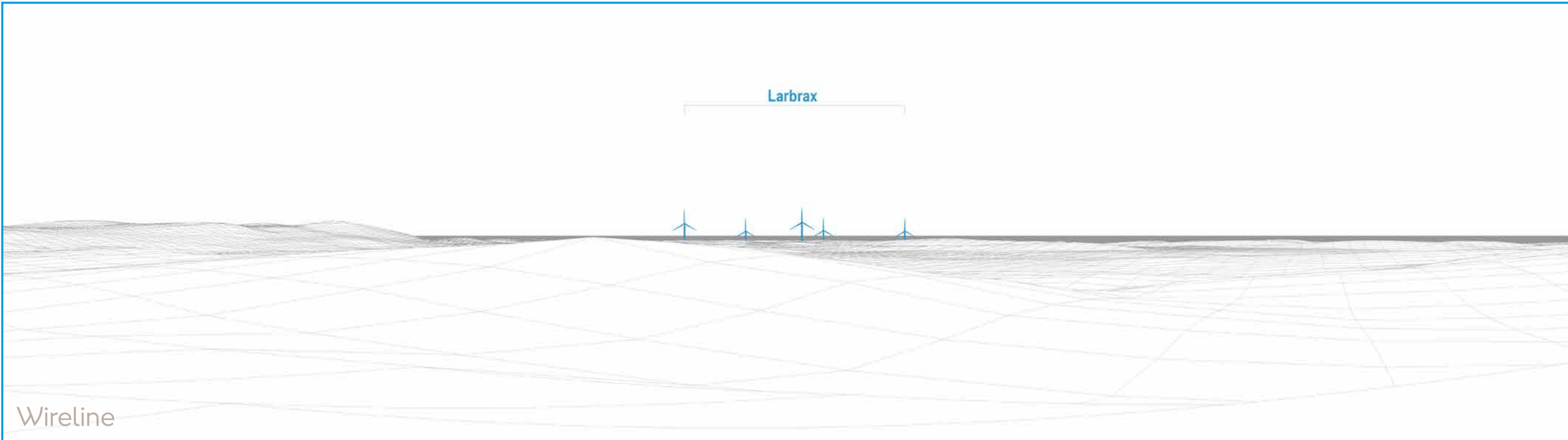
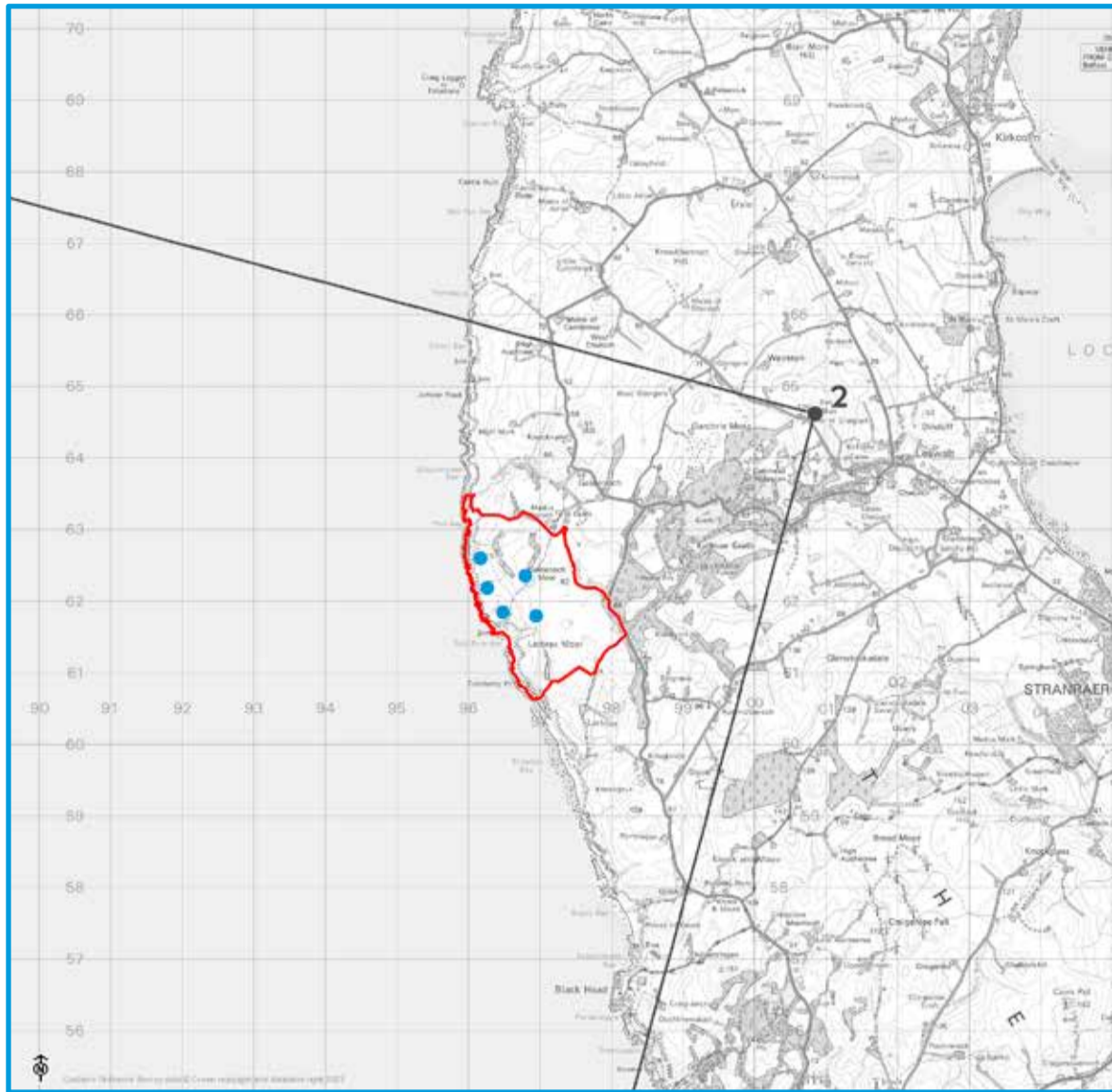


# 11. Viewpoint 2: Agnew Monument

Location (OS Grid reference): 200834 E 564617 N  
Direction of view: 240°  
Horizontal field of view: 90° (cylindrical projection)



Photograph



Wireline



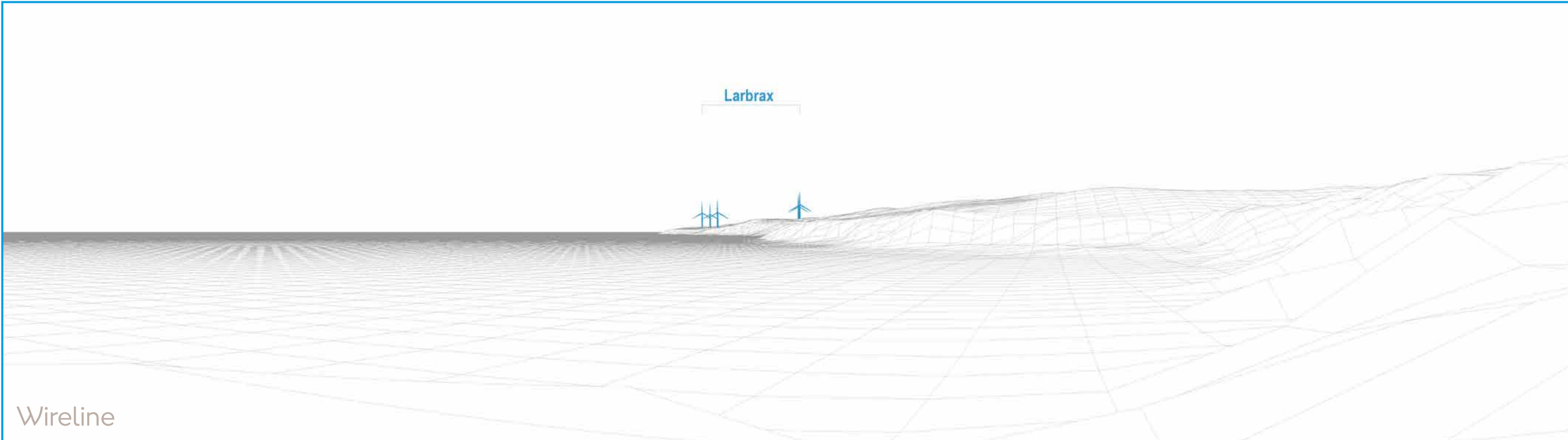
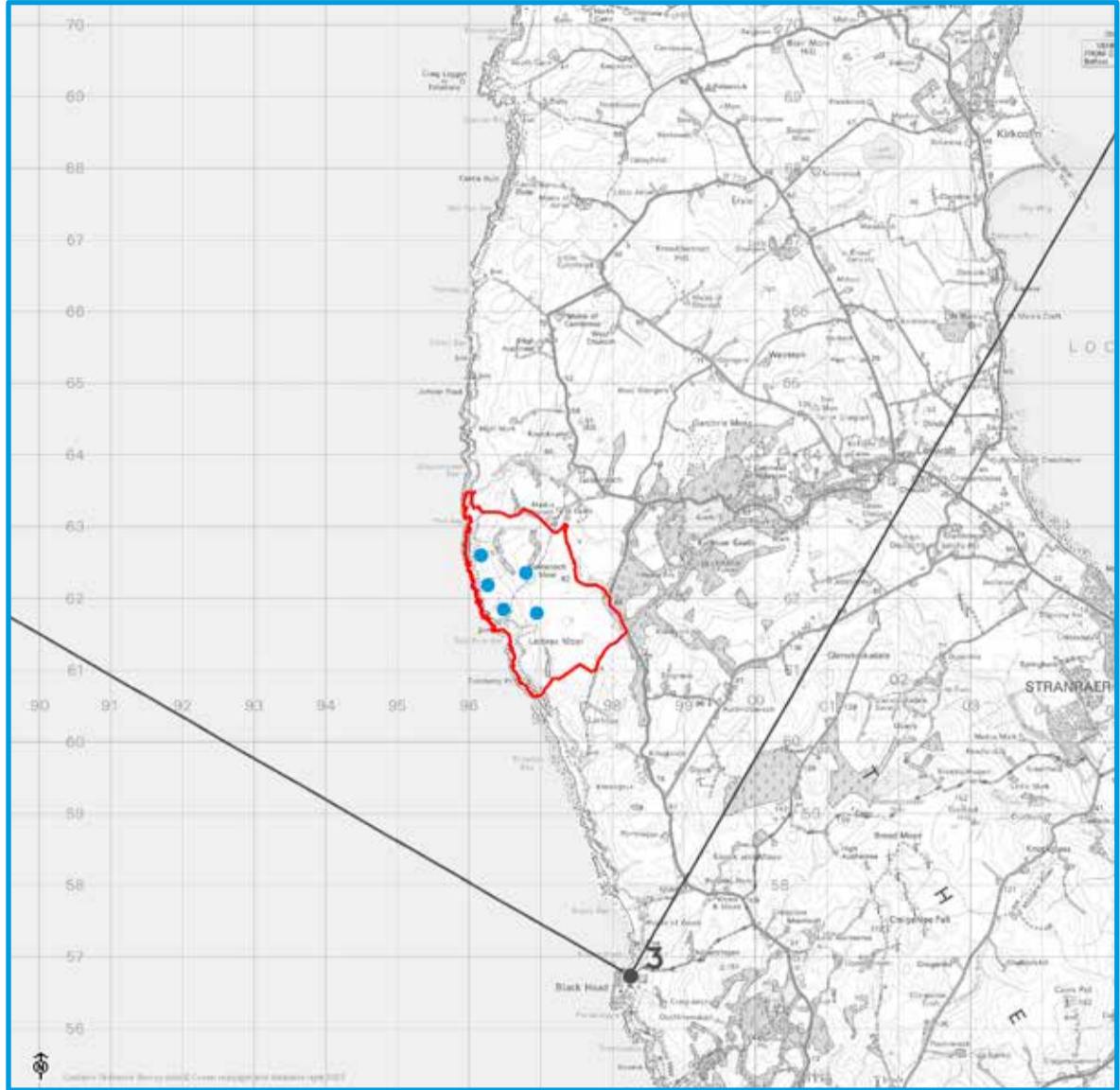
Proposed Turbine Photomontage (Height to Tip 149.9m)



# 12. Viewpoint 3:

## Parking Area, near Killantringan Lighthouse

Location (OS Grid reference): 198242 E 556737 N  
Direction of view: 345°  
Horizontal field of view: 90° (cylindrical projection)



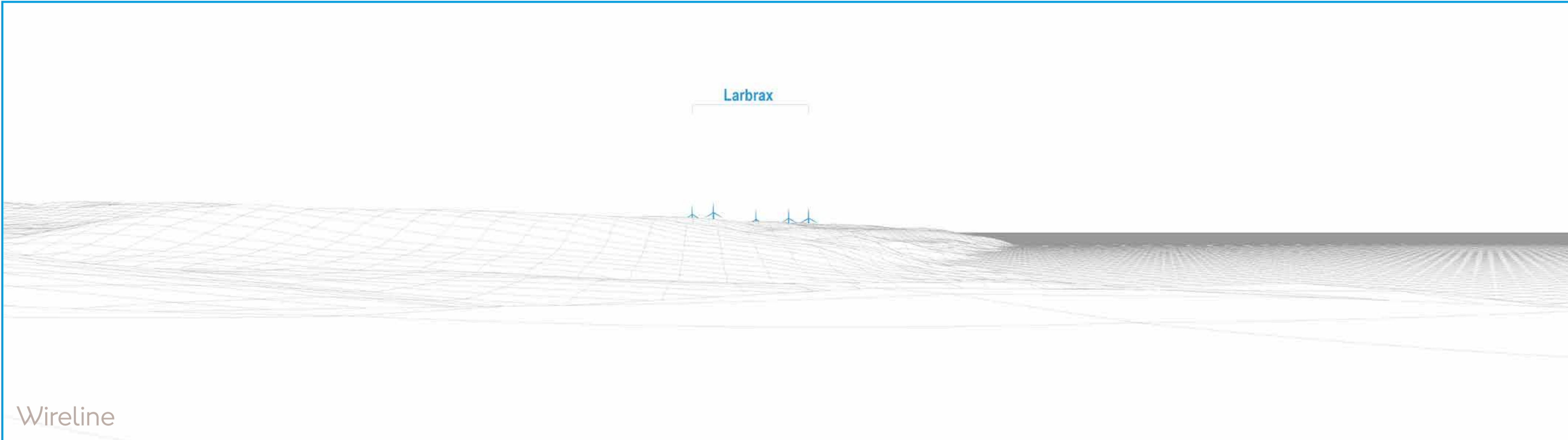
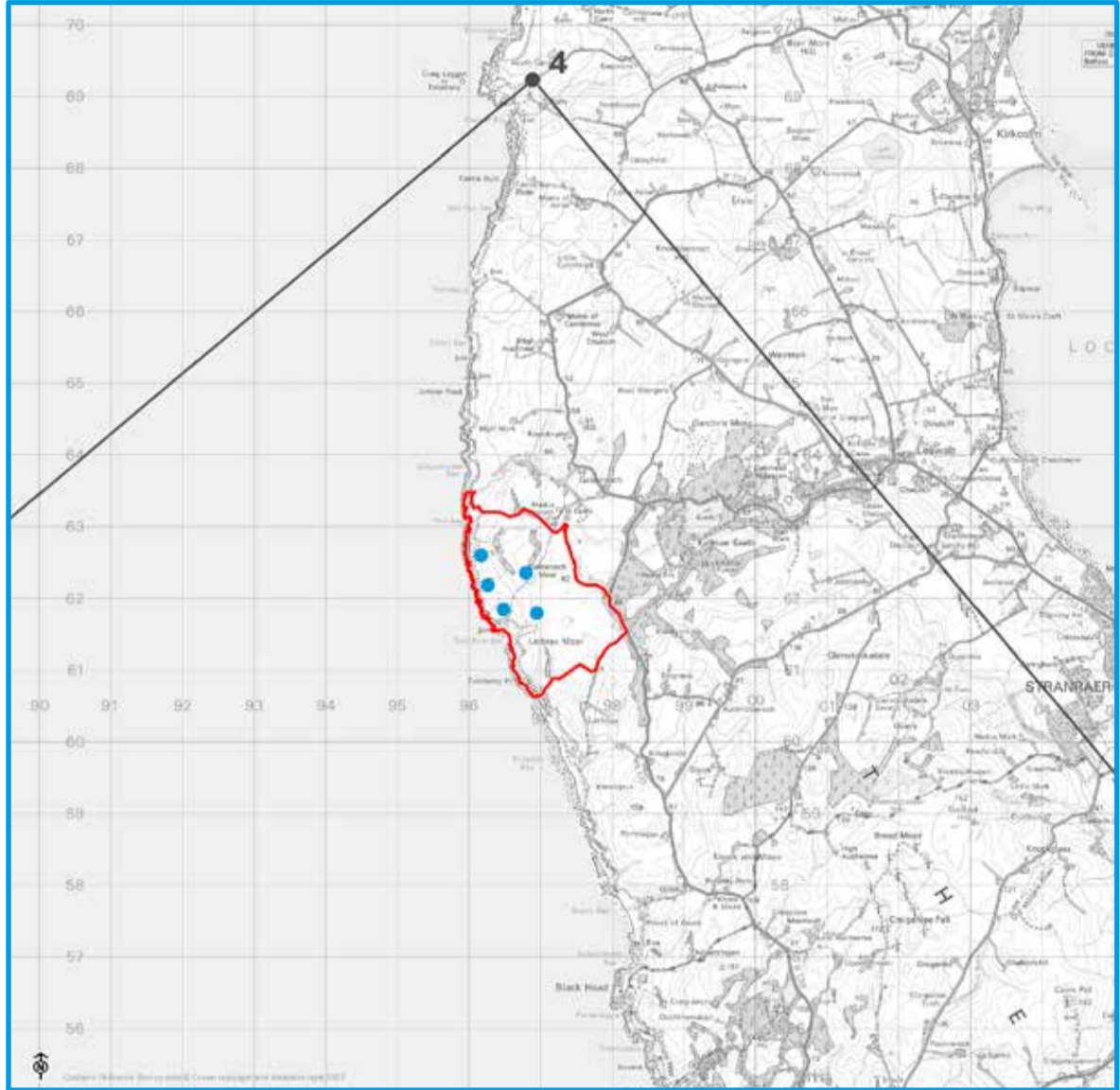


# 13. Viewpoint 4: South Cairn

Location (OS Grid reference): 196889 E 569230 N  
Direction of view: 185°  
Horizontal field of view: 90° (cylindrical projection)



Photograph



Wireline



Proposed Turbine Photomontage (Height to Tip 149.9m)



# 14a. Environmental Impact Assessment

## Environmental Impact Assessment

As was done for the consented Larbrax Wind Farm in 2015, an Environmental Impact Assessment Report (EIAR) will be prepared and submitted with the planning application to Dumfries and Galloway Council. We have already prepared an EIA Scoping Report which sets out which effects will be assessed in the EIAR and our proposed approach to doing so for each environmental topic. The EIA Scoping Report can be viewed on the Dumfries and Galloway Council planning portal (reference 23/2032/SCO). The EIA Scoping Report was submitted to Dumfries and Galloway Council in September 2023 with a request for an EIA Scoping Opinion as to which effects should be assessed and how in the EIA. Details are provided below of the environmental topics which are proposed to be assessed in the EIAR.



### Landscape and Visual Amenity

The landscape and visual amenity assessment (LVIA) will assess effects on local landscape and visual amenity (views), including from selected viewpoints, settlements and routes, including cumulatively with other existing or proposed wind farms. The LVIA will also include a Residential Visual Amenity Assessment (RVAA).

### Geology, Hydrology, Hydrogeology and Peat

The EIA will assess effects on geology, hydrology, hydrogeology (groundwater) peat, private water supplies (PWS) and groundwater dependent terrestrial ecosystems (GWDTEs). Where the revised Larbrax Wind Farm design will require the removal of peat, then a peat management plan (PMP) will be prepared to identify the quantity to be excavated during construction and how this will be responsibly managed.

### Ecology

An ecological impact assessment (EclA) will consider the potential impacts of the revised Larbrax Wind Farm on important ecological features (such as important habitats of conservation value, protected species including bats and designated nature sites) during construction and operation. The Outline Biodiversity Enhancement and Management Plan (OBEMP) will be prepared to support the EclA.

### Ornithology

The EIA will include an assessment of effects of the revised Larbrax Wind Farm on bird populations during construction and operation, particularly legally protected species and other notable birds of high nature conservation value which may be breeding or residing nearby.



# 14b. Environmental Impact Assessment

## Noise

The effects of noise associated with construction vehicles, plant and machinery and aerodynamic noise produced by the blades whilst they operate at the nearest residential receptors will be assessed. A cumulative assessment will consider the impact of operational noise from other nearby turbines in addition to the revised Larbrax Wind Farm.

## Cultural Heritage

The potential effects on known heritage assets within the site (including unknown buried archaeology should they be found), setting effects on assets within the wider area and cumulative effects on designated and non-designated historic assets of local, regional, national and international importance will be assessed.

## Access, Traffic and Transport

Potential traffic related effects, such as delays, impacts on pedestrian journeys and accidents and safety during the construction period will be assessed. Cumulative effects on transport and traffic will be included in this assessment where Larbrax Wind Farm could overlap with other known projects using the same road network. Measures to minimise disturbance from increased HGV traffic, staff traffic and the movement of abnormal loads on local communities and the local road network during construction will be proposed.

## Shadow Flicker

Shadow flicker occurs when turbines cause a flickering effect inside a building where sunlight passes through a window or door. Even though shadow flicker should not be an issue due to the distance of the turbines from properties, the assessment will quantify the worst-case level of exposure the nearest residential receptors could experience once the revised Larbrax Wind Farm is operational, and how this would be managed.

## Climate Change

A carbon balance assessment will measure the sources of carbon emissions associated with the project during construction as well as carbon savings generated by operating the project. The assessment will also consider resilience of the project to projected climate change effects and how it may affect the ability of receptors to adapt to climate change.

The EIA will be available for viewing on the Ørsted website as well as the Dumfries and Galloway Council online planning portal. Once the planning application is submitted, Dumfries and Galloway Council will invite comments on the content of the EIA from statutory and non-statutory consultees, including internal council departments, SEPA, NatureScot, Historic Environment Scotland and local community councils before making a decision on the application. Members of the public will be able to make representations to Dumfries and Galloway Council on the proposals. Information on how to make representations will be advertised by Dumfries and Galloway Council in the local and national press.





# 15a. Our Work to Date

## Our Work to Date

We are currently undertaking extensive environmental surveys to optimise the turbine layout and to minimise impacts on the environment and people. We have completed the following surveys to date which will inform the assessments within the EIA:

### Peat

Phase 1 peat probing was undertaken in July 2023 and this has supplemented peat depth data collected in 2015 for Larbrax Wind Farm. This has provided a comprehensive overview of the presence of peat within the site. Findings include:

- 67.5% of peat probes with peat depths of less than 50cm (meaning no peat);
- 11.7% of peat probes recorded peat depths between 50cm and 100cm; and
- 20.8% of the probed locations showed peat depths greater than 100cm with a maximum depth of 540cm.

We will be undertaking further detailed Phase 2 probing as the design progresses and this will be used to optimise the layout, inform the preparation of a PMP and Peat Landslide Hazard Risk Assessment (PLHRA) (if required). A Peatland Condition Assessment will also be undertaken, to inform discussions on potential peatland enhancement or restoration opportunities.

### Private Water Supply Questionnaires

Avoiding impacts to local residents' private water supplies is of utmost importance to Ørsted. As such, our hydrology consultants have issued questionnaires to nearby properties in order to determine whether these properties have their own supply in the vicinity of the site so that we can avoid impacts through design as far as possible.

### Traffic and Transport

We have been undertaking traffic surveys and doing research to obtain information on existing traffic flows for roads which are likely to be used by construction traffic. This data will be used to assess the traffic and transport effects in the EIA. We have also been investigating the off-site works which may be required to facilitate the safe transportation of turbine components to the site.

### Noise

We have undertaken noise monitoring at four residential properties surrounding the site between November 2021 and January 2022, using the most recent and robust survey method available. The noise survey measured background noise in a wide range of wind conditions and are considered to be representative of the baseline noise conditions of the local area. The baseline noise levels will be used to determine operational noise limits for each property included in the operational noise assessment. It is against these limits which the revised Larbrax Wind Farm will be assessed, and it is likely that these will be used to inform a planning noise condition which limits the levels of exposure for local residents. A key design objective will be to ensure that the operational noise limits for each property are not exceeded, including when Larbrax Wind Farm is operating alongside the other turbines nearby.

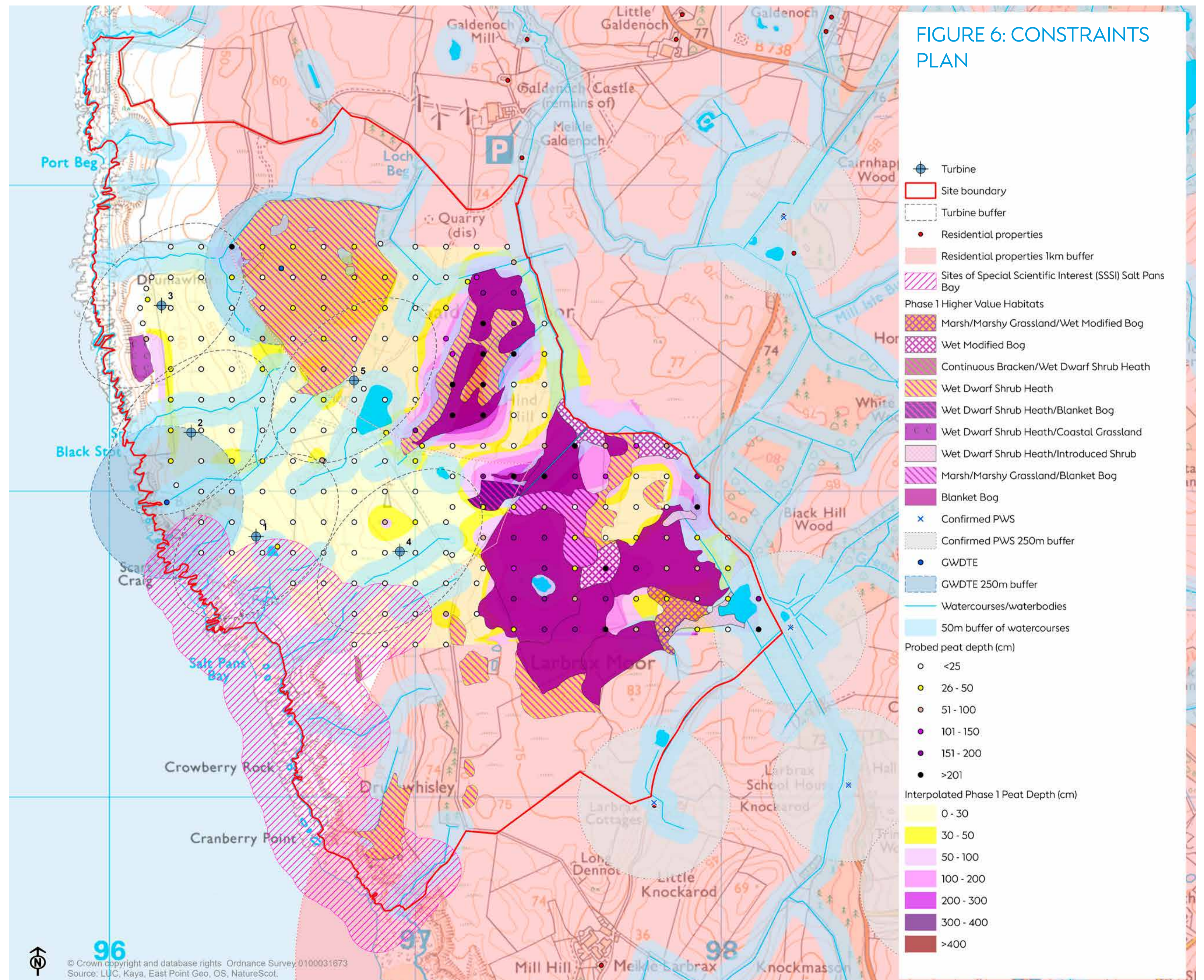


# 15b. Our Work to Date

## Ecology and Ornithology

Updated habitat and protected species surveys were completed in summer 2023 to provide validation and to update surveys undertaken in 2013, 2017 and 2021. The latest surveys recorded the presence of badger and some habitats of higher conservation value such as blanket bog, wet modified bog and wet dwarf shrub heath, which is consistent with the results of the previous surveys.

Additional bird surveys were completed for one breeding season between March and August 2021. Flight activity surveys recorded 12 species of high conservation value such as barn owl, peregrine falcon, hen harrier, greylag goose and merlin. No breeding raptors were found within the site, however barn owl and peregrine falcon were known to be breeding outside the site. Breeding wader surveys found species such as curlew, lapwing, oystercatcher and snipe. No evidence of black grouse was found. Breeding locations and key foraging locations of target species will be taken into consideration in the design process to minimise the risk of disturbance, displacement and collision effects.





# 16. Next Steps and Feedback

## Next Steps and Feedback

We place great importance on the impact the project may have on the environment and local community, and are therefore keen to have your feedback to help us develop the project in the best way possible.

We would be grateful if you could spare five minutes to complete our questionnaire. You can also send your comments or feedback to us as follows:

E: [larbrax@orsted.com](mailto:larbrax@orsted.com)

P: **Ørsted, 2nd Floor, 2 Lochrin Square, 96 Fountainbridge, Edinburgh EH3 9QA**

This Round 1 consultation will run until **28th November 2023**. You will still be able to view the information presented in this exhibition on our website ([www.larbraxwindfarm.co.uk](http://www.larbraxwindfarm.co.uk)) after this date.

The timeline adjacent sets out the next steps proposed for the revised Larbrax Wind Farm project and indicative timescales.

Thank you for taking the time to visit this public exhibition and we look forward to hearing from you soon.

