

CHRÀTHAICH WIND FARM

Welcome to this public exhibition outlining the proposal to develop the Chràthaich wind farm near Cannich in the Highlands.

About the developer

Chrathaich Renewables LLP are looking at the opportunity to develop a wind farm at Corrimony Farm. The developer is a partnership comprising the Girvan Family, owners of Corrimony Farm, and Muirden Energy LLP, a Scottish renewable energy developer.

Over the past decade, both partners have had a keen interest in sustainability, with the landowner volunteering to work with SRUC as a Climate Change Focus Farm and Muirden Energy LLP developing numerous onshore wind energy projects.

This latest project would generate a large amount of renewable electricity, which would provide a significant contribution towards the Scottish Government's ambitious renewable energy targets, whilst providing support and security for the businesses.

About the exhibition

This exhibition presents information about the proposal, including explanations of why we identified the site for a potential development, visualisations showing how the wind farm development would appear, and a description of the environmental and technical studies that are being undertaken to assess environmental effects.

Working together

We would like to hear your views on our proposal, so once you have reviewed the exhibition materials please provide some feedback so that they can be considered in the ongoing design process.

Comments made to the development team are not representations to Highland Council or The Scottish Government. Following the submission of a planning application, there will be an opportunity to make representations to both of these organisations.



Strath of Brydock Wind Farm. Image for illustrative purposes only.

THE WIND FARM SITE

The site for the proposed development is situated approximately 7km southeast of Cannich, 7km northwest of Invermoriston, 12km north of Fort Augustus, and 13km southwest of Drumnadrochit.

The site is located on the slopes around and beneath Meall a' Chràthaich, Carn na Ruighe Duibhe, Loch a' Mhuilinn, Loch na Leirisdein, and Loch nam Meirleach, which vary in elevation between 430m-679m AOD. The site is predominantly upland heath habitat with a variety of lochs and lochans, and several watercourses that drain to Loch ma Stac and the River Enrick.

The site is located less than 1km southeast of the operational Corrimony wind farm and less than 1km northwest of the operational Bhlaraidh wind farm.

Attributes

The site has a number of attributes that would contribute towards a successful site for wind energy generation:

- » *High average wind speeds;*
- » *Large separation distances from residential properties;*
- » *No on-site ecological or landscape designations;*
- » *Opportunity to create a coherent extension to Bhlaraidh wind farm; and*
- » *Close proximity to Beaully-Denny electricity transmission line.*

Consequently, Chrathaich Renewables LLP would like to create a proposal that is both directly and indirectly sensitive to the environment and the surrounding landscape. In order to achieve this aim; the wind farm plans are being influenced by the results of environmental studies and feedback received from local communities.



View towards wind farm site from A831, Millness

ELECTRICITY GENERATION

The Chràthaich Wind Farm would contribute to the growth of Scotland’s largest renewable energy technology by developing a further 14 wind turbines.

Key facts

- » The wind turbines proposed would generate electricity for a period of at least 30 years;
- » Each wind turbine would have a generating capacity of up to 5MW;
- » Based on a 27% capacity factor (UK average), a 5MW wind turbine would generate 11,826 MWh¹ of electricity each year; and
- » Based on the installation of 5MW wind turbines, the development would generate sufficient electricity to meet the average annual demands of approximately 47,035 households²

Candidate turbine specification

There are currently several candidate wind turbines being considered for the proposal. For the purposes of the Environmental Impact Assessment, the wind turbine model with the most pronounced impact will be considered for each assessment. The current parameters of the proposed wind turbine model are detailed in the table below.

Hub height	Circa. 92m
Blade tip height	150m
Rotor blade diameter	Circa. 117m
Individual generating capacity	Up to 5MW
Total generating capacity	Up to 70MW

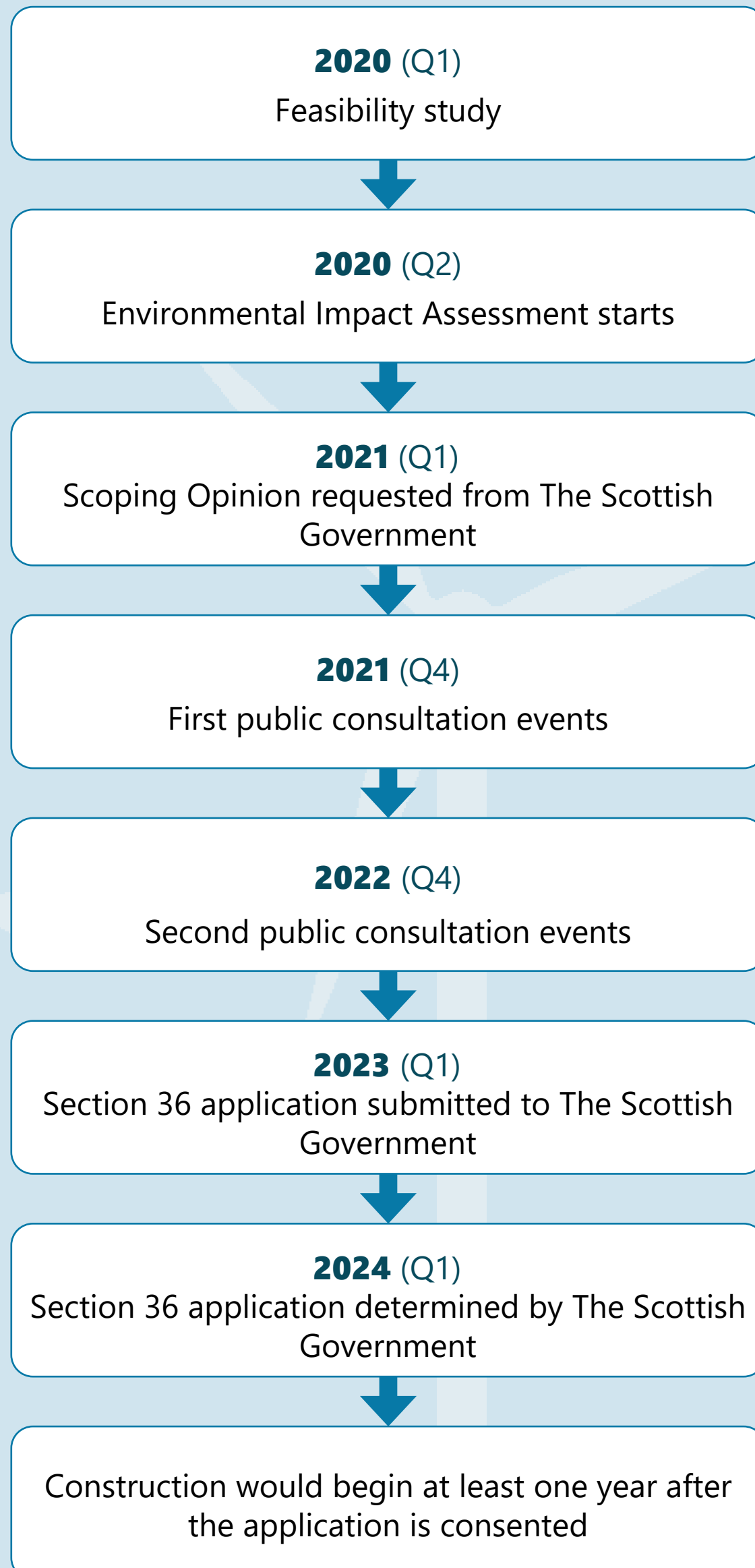


A candidate wind turbine model.

1 1MWh is equal to 1000kWh. For example, 1kWh is the approximate equivalent to doing 1 load of laundry in a washing machine.
2 Figures based on the average domestic electricity consumption in Scotland (3,520kWh) in 2020 published in December 2021 by the Department for Energy and Climate Change in the report ‘Sub-national gas and electricity consumption statistics’ and the average UK capacity factor of 27%.

PROJECT TIMELINE

An indicative timeline for the project is provided below. Updates on each stage of the process will be provided on the project's dedicated website: www.chrathaichwindfarm.co.uk



ENVIRONMENTAL IMPACT ASSESSMENT

An Environmental Impact Assessment (EIA) will be submitted to the The Scottish Government as part of the planning application. These documents will include studies on the proposal's compliance with national and local planning and energy policy, relevant environmental regulations and considerations, and the potential for effects on residential amenity.

Assessments of the impacts of the proposal on the following sensitivities are being undertaken:

- » *Landscape and Visual;*
- » *Ecology;*
- » *Ornithology;*
- » *Noise;*
- » *Hydrology;*
- » *Peat and Geology;*
- » *Archaeology and Cultural Heritage;*
- » *Transport and Access;*
- » *Shadow Flicker;*
- » *Communications and Aviation Infrastructure; and*
- » *Carbon Balance.*

The wind farm's design will correspond with the key findings of the studies to ensure the proposal is sensitive to the surrounding environment.



ENVIRONMENTAL IMPACT ASSESSMENT

Planning Policy

The project has been designed and assessed against all relevant national and local planning policy, in particular the current Highland wide Local Development Plan (2012), the Caithness and Sutherland Local Development Plan (2016) and Highland Council's Supplementary Guidance: Onshore Wind Energy (2016).

Ecology and Ornithology

No ecological or ornithological designations have been assigned to the wind farm site. However, the nearest designated sites have been considered throughout an ecological and ornithological impact assessment. In particular, consideration is being given to the Corrimony Nature Reserve.

Ecological and ornithological surveys have been undertaken to determine the use of the site by Schedule 1 and other sensitive bird species; to identify habitats present within the development area; to look for protected animals within the development area (European Protected Species, Schedule 5 Species and Badgers) and to assess the potential impacts of the development on nearby designated sites.

No significant impacts have been predicted to habitats and species. Where necessary, mitigation measures will be introduced to ensure best practice during construction.

Hydrology

Potential effects to the geological, hydrological and hydrogeological environment during the construction, operation and decommissioning of the wind turbines has been identified, assessed and where possible mitigation measures have been suggested. Analysis of Private Water Supplies in the area is also being carried out to ensure that no effects would be experienced during construction.

Cultural and Heritage Features

Potential direct and indirect effects on cultural and heritage features have been identified and assessed in depth following a walkover survey of the site by archaeologists. The current layout has been designed to avoid and minimise impacts to cultural and heritage features.



ENVIRONMENTAL IMPACT ASSESSMENT

Shadow Flicker

Shadow flicker can be caused by rotating wind turbine blades that periodically cast shadows over nearby properties as they turn. Shadow flicker should not occur when wind turbines are sited over 11 rotor diameters (approx. 1300m in this instance) from residential houses as the blades do not cover the sun, but partially mask it at greater distances. All residential properties would be over 5km from the nearest wind turbine and therefore no shadow flicker effects will occur at residential properties. A shadow flicker assessment will be included in the EIA Report.

Noise

A noise impact assessment is being carried out to ensure that any noise emitted by the turbines complies with The Highland Council standards. A comprehensive and robust assessment methodology has utilised guidance from The Highland Council, ETSU-R-97 and the Institute of Acoustics good practice guide. By assessing the worst-case scenario, a thorough and conservative assessment will be undertaken on the potential effects to the amenity of nearby residential properties. Noise levels will be below the UK and Council's limits at all surrounding residential properties.

Transport

A transport route assessment is being undertaken and will be submitted as part of the EIA Report. At this stage, different routes are still being investigated and discussions are ongoing with The Highland Council, which will enable us to choose the most practical route to the wind farm site.

Electromagnetic Interference

There is the potential for wind turbines to interfere with electromagnetic signals that transmit telecommunication signals and television broadcasts. There would be no interference with telecommunication signals and interference effects to television broadcasts and radio reception are not anticipated. Further details of these studies will be provided within the EIA Report.

Aircraft safety and radar

Preliminary consultation has advised that there will be no adverse effects to aircraft safety. During the planning process further consultation will take place with BAA, NATS and the Ministry of Defence to ensure that there are still no potential adverse effects.



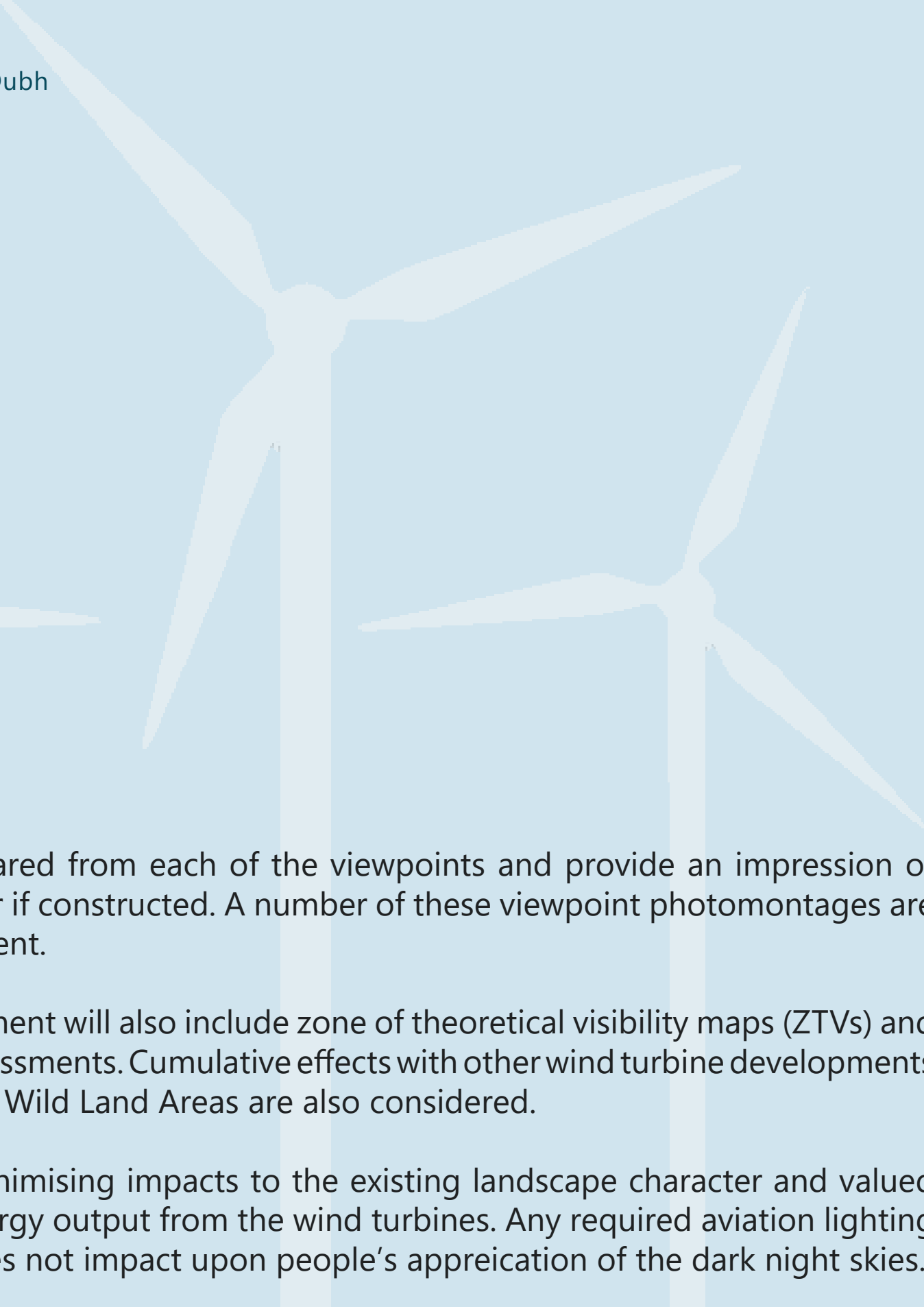
ENVIRONMENTAL IMPACT ASSESSMENT

Landscape and Visual

The landscape and visual impact assessment methodology incorporates guidance produced by The Highland Council, NatureScot and The Landscape Institute.

The suitability of the wind farm design and its location is being assessed in the the context of the surrounding landscape character and nearby landscape designations. An assessment of the visual impact at viewpoints, such as residential dwellings, popular viewpoints and key transport corridors is also being undertaken.

Viewpoints, including settlements, roads and recreational locations, have been agreed in consultation with Highland Council and NatureScot. The full list of viewpoints is provided below:

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1. Coire Loch Trail, Glen Affric
 2. Affric-Kintail Way, near Lochan Dubh
 3. A831, Millness
 4. Meall Fuar-mhonaidh
 5. Meall Mor
 6. Creag Dhubh
 7. B862, south of Foyers
 8. Suidhe Viewpoint
 9. A833, above Milton
 10. Meall Dhubh
 11. Toll Creagach
 12. Path by Loch Affric
 13. Sgurr na Ruaidhe
 14. Carn Ghluasaid
 15. B852, lochside picnic layby
 16. Poll-gormack Hill
 17. B862, south of Dores
 18. Carn na Saobhaidhe
 19. Great Glen Way
 20. Track near Dun Fhamhair Fort
 21. A835, Leanaig Junction
 22. Sgurr na Diollaid
 23. Beinn a Bha'ach Ard
 24. Geal Charn
 25. Ben Wyvis (An Cabar)

Photomontages are being prepared from each of the viewpoints and provide an impression of how the wind farm would appear if constructed. A number of these viewpoint photomontages are displayed at this consultation event.

The landscape and visual assessment will also include zone of theoretical visibility maps (ZTVs) and detailed landscape character assessments. Cumulative effects with other wind turbine developments and the potential for impacts on Wild Land Areas are also considered.

Emphasis is being placed on minimising impacts to the existing landscape character and valued views, whilst still maximising energy output from the wind turbines. Any required aviation lighting would be infra red, so that it does not impact upon people's appreciation of the dark night skies.

TRANSPORT AND ACCESS

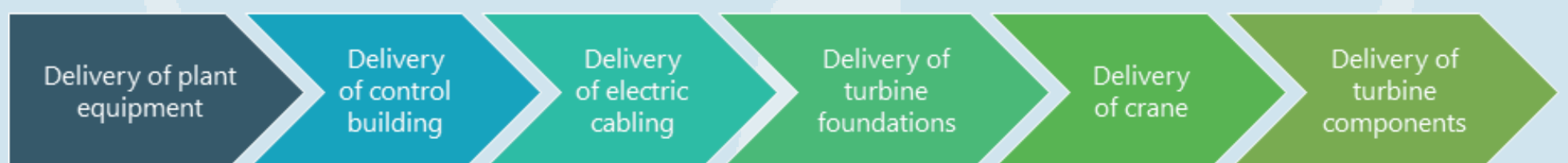
Construction traffic impacts will be minimised and mitigated where possible. In order to achieve minimal disruption and to highlight potential issues, a comprehensive survey of the access route along public roads is being undertaken and will be submitted as part of the planning application.

It is currently envisaged that the manufacturer will deliver wind turbine components using the existing access track to the operational Corrimony Wind Farm. A trial run will be undertaken prior to the first delivery to demonstrate that the route between the port of entry and the site entrance off the A831 (see Site Layout plan), near Millness, is suitable for the abnormal load vehicles. An investigation into the most suitable port of entry is currently being undertaken.

Anticipated construction traffic volumes and associated impacts on the road network as well as any necessary road upgrades will be detailed in the EIA Report submitted as part of the planning application.

If the wind farm receives planning consent, Chrathaich Renewables LLP are keen to keep members of the local communities up to date with the schedule for all activities, and consequently we will invite members of the public to join the team at regular Community Liaison Meetings. At these meetings attendees will hear about the programme of works and they will have the opportunity to ask any question regarding the process.

Timeline of key transportation works



Wind turbine blades being transported through Aberdeen with escort vehicles

CONSTRUCTION

If planning permission is granted, the wind farm will be constructed in various stages with the majority of work undertaken onsite before the arrival and installation of the wind turbines. Site works will include the construction of access tracks, laying of underground cables, and the construction of a sub-station, control building and a temporary site compound.

Planning conditions will be agreed with The Highland Council and The Scottish Government with input from relevant statutory consultees to ensure that impacts are minimised during the construction process. To ensure compliance with these conditions and best practice construction methods, a Construction Method Statement will be produced with input from The Highland Council, the Scottish Environmental Protection Agency, and NatureScot.

On commissioning of the wind farm the majority of the site will then be restored to allow regeneration of the environment by following measures outlined in the Habitat and Peat Management Plans. However, the access tracks will be retained to enable maintenance to be carried out and the eventual decommissioning of the site.

In order to ensure the safety of members of the public, the site will have some access restrictions during the construction period.



Construction of Newton of Fortrie Wind Farm in Aberdeenshire

ONSHORE WIND ENERGY

In May 2019, the Scottish Government declared a climate emergency and pledged to drastically reduce carbon emissions from Scotland in future years. As part of its response, the Scottish Government has set a legally-binding target to achieve net-zero emissions by 2045.

The Scottish Energy Strategy¹ outlines the role that energy generation must play to reduce carbon emissions by setting the following target for the Scottish energy system by 2030:

'The equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources.'

Onshore wind farms are now the lowest cost way to generate electricity and it therefore has an important role to play. A summary of the benefits of onshore wind energy is provided below.

Benefits of onshore wind turbines

- » *Wind turbines reduce the emission of carbon dioxide and consequently slow climate change. Fossil fuels, such as coal, gas and oil release carbon dioxide into the atmosphere, whereas operational wind turbines produce no carbon dioxide.*
- » *The declining abundance of fossil fuels makes the energy self sufficiency of a country increasingly important. A decreased reliance on energy imports makes the country less vulnerable to security threats and adds diversity to the supply of energy providing a more dependable overall energy resource.*
- » *Traditional burning of fossil fuels contributed to the reduction in air quality, which has led to respiratory diseases. Wind energy is clean and releases no harmful by-products.*
- » *Wind supplies are infinite and cost nothing. The wind resource is substantial and can be easily converted into electricity. The demand for electricity is also greatest during cold, windy days when turbines generate energy at their highest levels.*
- » *Value for money. Onshore wind power is now the lowest cost way to generate electricity²; reducing its costs by a quarter since 2010. Ensuring that the UK continues to replace its aging power stations with the cheapest form of electricity generation will help keep consumer bills as low as possible.*
- » *Job creation. There are now over 8,000 people working in the onshore wind industry in Scotland³. These jobs are often in rural communities, where local suppliers are used for development and construction of wind farms.*
- » *Public support for onshore wind in the UK is near an all-time high according to the Government's own research, with 77%⁴ of those polled stating their support for the technology.*
- » *Community benefit payments totalling more than £22 million a year are being paid to communities around Scotland⁵.*

1 <http://www.gov.scot/Publications/2017/12/5661>

2 <https://www.nao.org.uk/wp-content/uploads/2016/07/Nuclear-power-in-the-UK.pdf>

3 Fraser of Allander Institute: The Economic Impact of Scotland's Renewable Energy Sector, June 2021

4 <https://www.gov.uk/government/statistics/energy-and-climate-change-public-attitudes-tracker-wave-33>

5 <https://www.localenergy.scot/projects-and-case-studies/searchable-register-of-community-benefits/>

COMMUNITY OWNERSHIP

In addition to the community benefit fund, Chrathaich Renewables LLP would like to discuss other options for the local community to become involved in the project. For example this can involve:

» *Community ownership in the form of a co-operative*

» *Community ownership of a turbine*

Community ownership in the form of a co-operative

It is possible to set up a regulated co-operative that would allow local communities and individuals to invest varying amounts in the project in order to own a share of the wind farm development.

Shareholders of the co-operative would consequently profit from the sale of green electricity. Members can invest varying sums from between £250 to £20,000. The profits are then distributed to members through an annual dividend.

Preference for joining the scheme is given to people living in areas closest to the wind farm development in order to maximise the economic benefits to the local community.

The co-op would be run democratically with each individual member having one vote.

The Kilbraur Wind Farm, amongst others, is an example of where this type of community ownership scheme has been introduced.

Community ownership of a turbine

Alternatively, Chrathaich Renewables LLP are willing to look into the possibility of the community ownership of either one of the wind turbines or a set proportion of the wind farm. This would allow a trust to receive an income from its stake in the wind farm to fund local initiatives over the lifetime of the project.

The Fintry Development Trust near Stirling started a process similar to this in 2003 and have since worked on a number of community projects to allow people in the local area to benefit and have a say in how the income generated is spent. Details of the process they undertook with the owners of the Earlsburn Wind Farm can be seen on their website (www.fintrydt.org.uk). Locally, Soirbheas, a charity, have also invested in the acquisition of part of the operational Corrimony Wind Farm, which is also located on Corrimony Farm. Soirbheas has subsequently used the returns to support the community, by providing funding to sports and hobby groups, community halls and schools, an apprenticeship scheme, and growing employment.

Other Local Benefits

If the proposal is granted planning permission, a local procurement strategy will be used to ensure that local businesses are given the opportunity to offer their services during construction and operation of the turbines.

COMMUNITY BENEFIT

Throughout the lifespan of the wind farm Chrathaich Renewables LLP are committed to working with the community to ensure the benefits of the wind farm are maximised. We will be contributing the suggested contribution (£5000/MW of installed capacity each year) towards local community benefit.

Community Benefits Package

If granted planning permission, the community benefits package would be set up to provide an annual fund available to the community. We are keen to ensure that surrounding communities gain meaningful benefits from the Chràthaich Wind Farm. At present, suggestions on the most suitable management structure and uses of the fund are welcomed.

Examples of previous funds we have been involved in have included projects that:

- » *Involve local community groups or sports clubs;*
- » *Involve community buildings or regeneration;*
- » *Enhance the environment or wildlife;*
- » *Involve local residents or events.*

Note

Community benefits, such as financial contributions, are voluntary arrangements offered by the developer of the wind farm to the community. Importantly, any financial contributions are not a material consideration in the determination of any future planning application. Contributing to community benefits discussions does not affect an individual's, community or organisation's right to express a view on the development proposals, and objecting to or supporting the development does not affect their right to discuss the community benefits proposals.

