

KNOCKCRONAL WIND FARM

VIRTUAL EXHIBITION

Autumn 2021



Berry Burn Wind Farm, Moray, 29 turbines, 100m tip height

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This exhibition is designed to share our plans for Knockcronal Wind Farm before we make an application to the Scottish Government later this year. We want to thank stakeholders and the community for sharing your views with us since we introduced the project and during the first consultation in Spring 2021.
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About Statkraft

- The largest generator of renewable energy in Europe
- A state owned utility, with origins in Norwegian hydropower 125 years ago
- 4,600 employees in 18 countries, all working towards our low carbon future
- Operating in the UK since 2006
- Distributed over £2 million to communities near operating wind farms

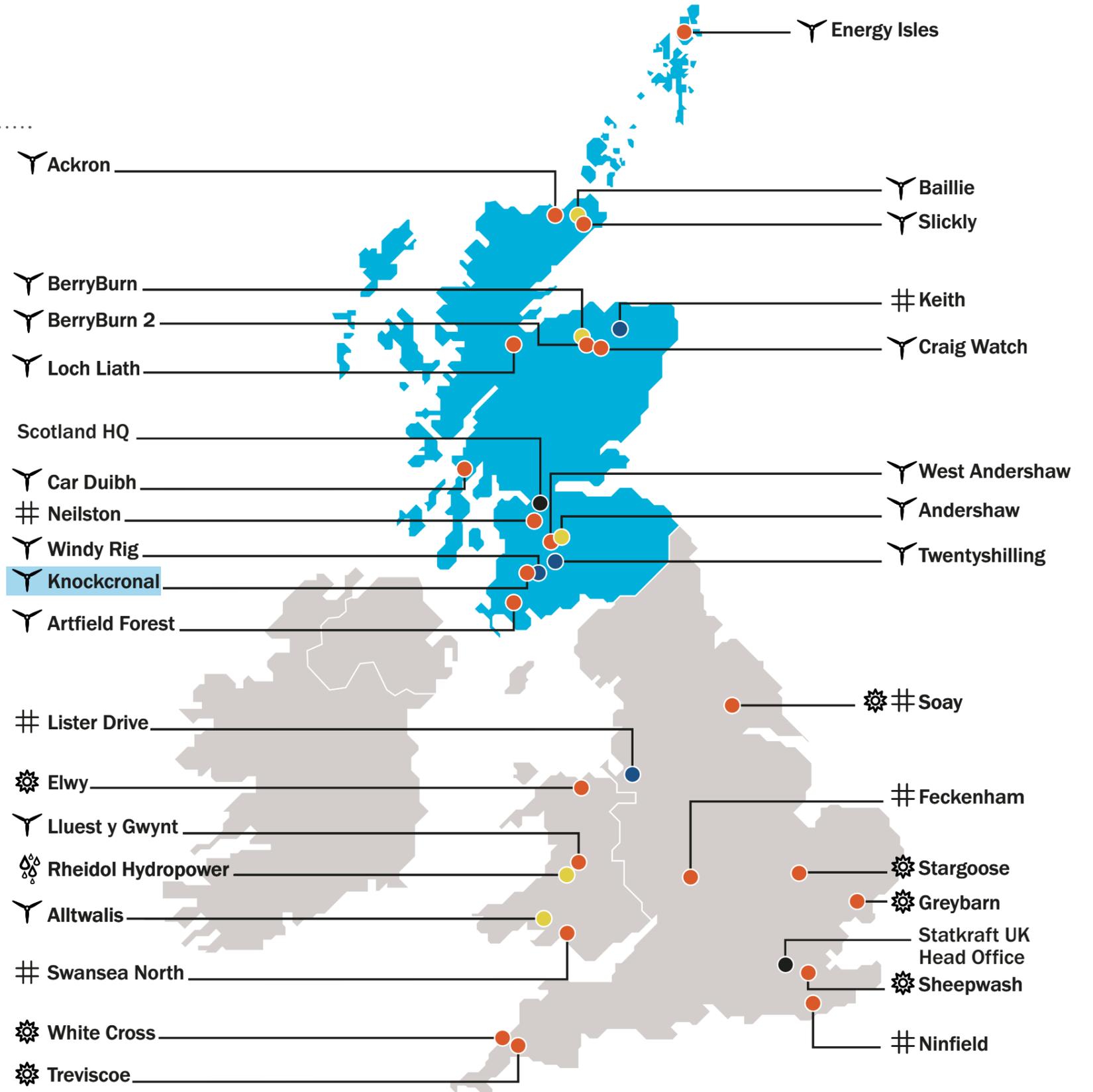


Andershaw Wind Farm, South Lanarkshire, 11 turbines, 140m tip height

Statkraft in the UK

- Scottish Head Office in Glasgow
- Portfolio includes four wind farms, one hydro plant
- Two wind farms in Dumfries & Galloway in construction
- Recent expansion into solar development and electric vehicle charging points
- Over 700MW in development
- Delivering grid stability services for National Grid in Moray and Liverpool

- Operational
- Construction
- Development
- Offices
- Y Wind
- # Greener Grid Park™
- ⚡ Hydro
- ☀ Solar



About Knockcronal Wind Farm

We believe this is an excellent site to contribute to Scotland's ambitions of reaching net zero emissions by 2045

Key Facts:

Number of Turbines:

9



Turbine Tip Height:

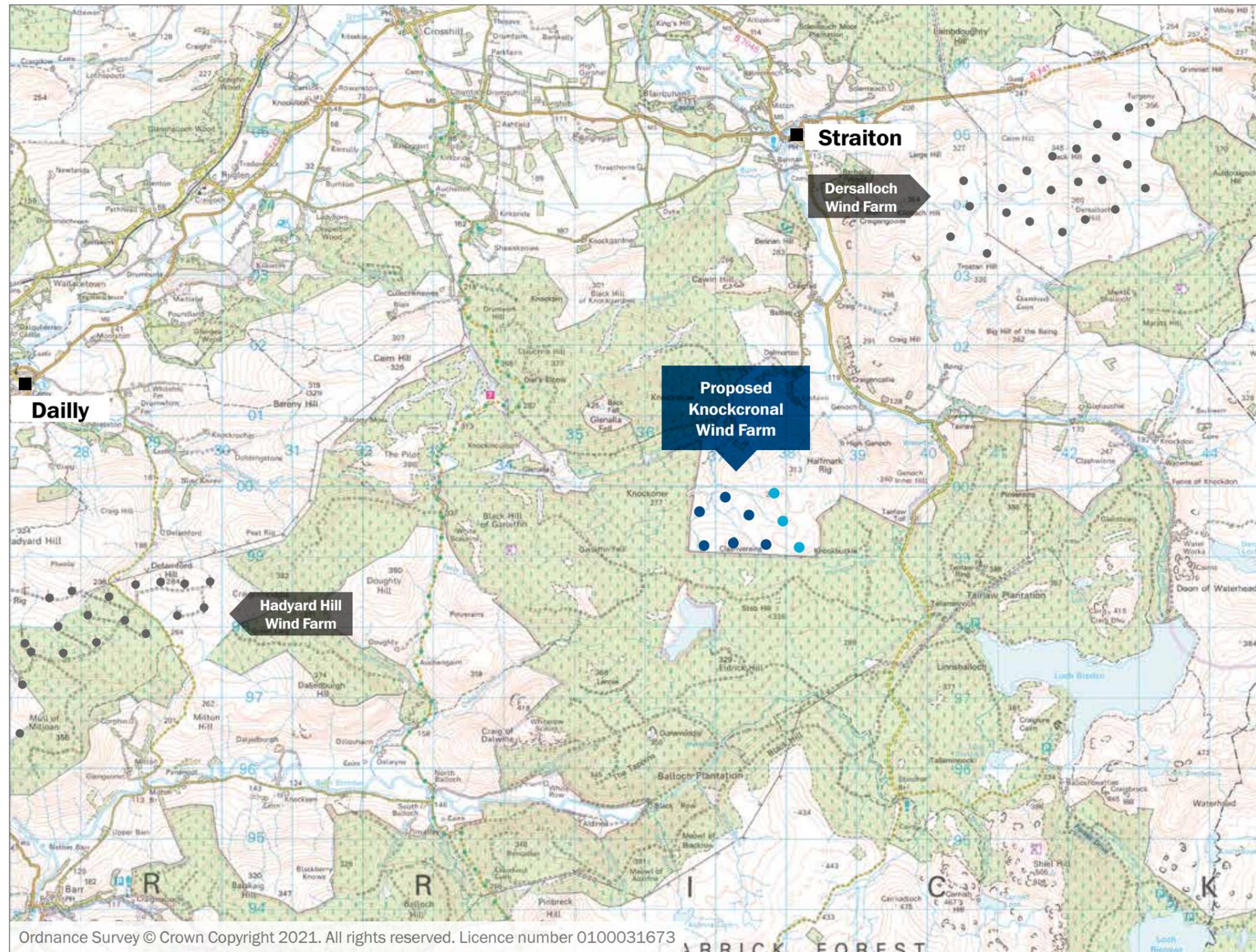
Up to 200m



Community Fund:

£297k
estimated per year*

*Based on 59.4MW x £5k per MW of installed capacity. If consented, value of fund determined by actual installed capacity.



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About Knockcronal Wind Farm

Why this site?

Good wind speeds
based on 13 months
of onsite monitoring

Development is approximately
5km from Straiton and
designed to be mindful of
surrounding area with limited
visibility from Straiton and no
visibility expected from Dailly

Development would
contribute towards **Scotland's
decarbonisation targets**

There are **no national or
internationally designated
sites** within the site boundary



	No. of Turbines	Max Blade Tip Heights Up To	Installed Capacity (MW)	Estimated Generation (homes equivalent)	Community Fund (per year)
Knockcronal	9	200m	59.4¹	Over 48,000*	Estimated £297,000 per year**

¹ Based on 9 x 6.6MW

* Based on 59.4MW of Installed Capacity, wind resource assessment and Scottish average household consumption of 3,393 kWh pa (BEIS Dec. 2020)

** Based on 59.4MW x £5k per MW of installed capacity. If consented, value of fund determined by actual installed capacity.

We have sought feedback and continued our studies over the past 9 months to present the optimal design for the proposed Knockcronal Wind Farm.

DECEMBER 2020	JANUARY 2021 - MAY 2021	MAY 2021 - AUGUST 2021	SEPTEMBER 2021 - DECEMBER 2021	DECEMBER 2021
<p>In December last year we requested the view of the Scottish Government and South Ayrshire Council on the level of study required (known as 'Scoping') to assess the Knockcronal Wind Farm proposal.</p> <ul style="list-style-type: none"> → 12 turbines → 12 turbines x 200m tip height. 	<p>Consultation with stakeholders and communities receiving their formal views and comments (within a document known as a 'Scoping Opinion') in March 2021.</p> <p>With this feedback and additional site work undertaken the proposal was revised:</p> <ul style="list-style-type: none"> → From 12 to 9 turbines → 6 turbines x 200m tip height → 3 turbines x 180m tip height → Reduce visual impact → Reduce noise → Avoid priority habitats. 	<p>1st Public Exhibition held May - June</p> <p>Feedback principally around location and visual impact.</p> <p>Slight design amendments:</p> <ul style="list-style-type: none"> → Three turbine locations revised → Site layout amends to: → Avoid priority peatland habitat → Minimise infrastructure footprint and use existing site infrastructure where possible → Provide more detail on access routes to site. 	<p>2nd Public Exhibition September - October</p> <p>The exhibition presents the wind farm layout expected to be submitted to the Energy Consent Unit later this year.</p> <p>There are a number of ways local residents can have their say.</p> <p>VISIT:</p> <ul style="list-style-type: none"> → 3 week online exhibition → 2 local in person drop in sessions → 1 online chat session. <p>We have written to over 1,300 homes to let them know about our proposals and request their feedback by returning the free post card.</p>	<p>Section 36 Application expected to be submitted.</p> <p>Members of the community and other interested stakeholders will have an opportunity to make formal representations to the Scottish Government.</p>

We believe the proposal takes into account stakeholder and community feedback and strikes a **good balance between maximising the electricity output** of the site while carefully designing the proposal to **relate to the existing landscape.**

The Story So Far

This is the wind farm design expected to be submitted after considering studies and feedback.

Use on site resources to minimise impacts on local roads during construction such as borrow pits.

Two access routes are being considered for the site. See P27 for more on transport.

Three turbine locations further revised to avoid priority peatland.

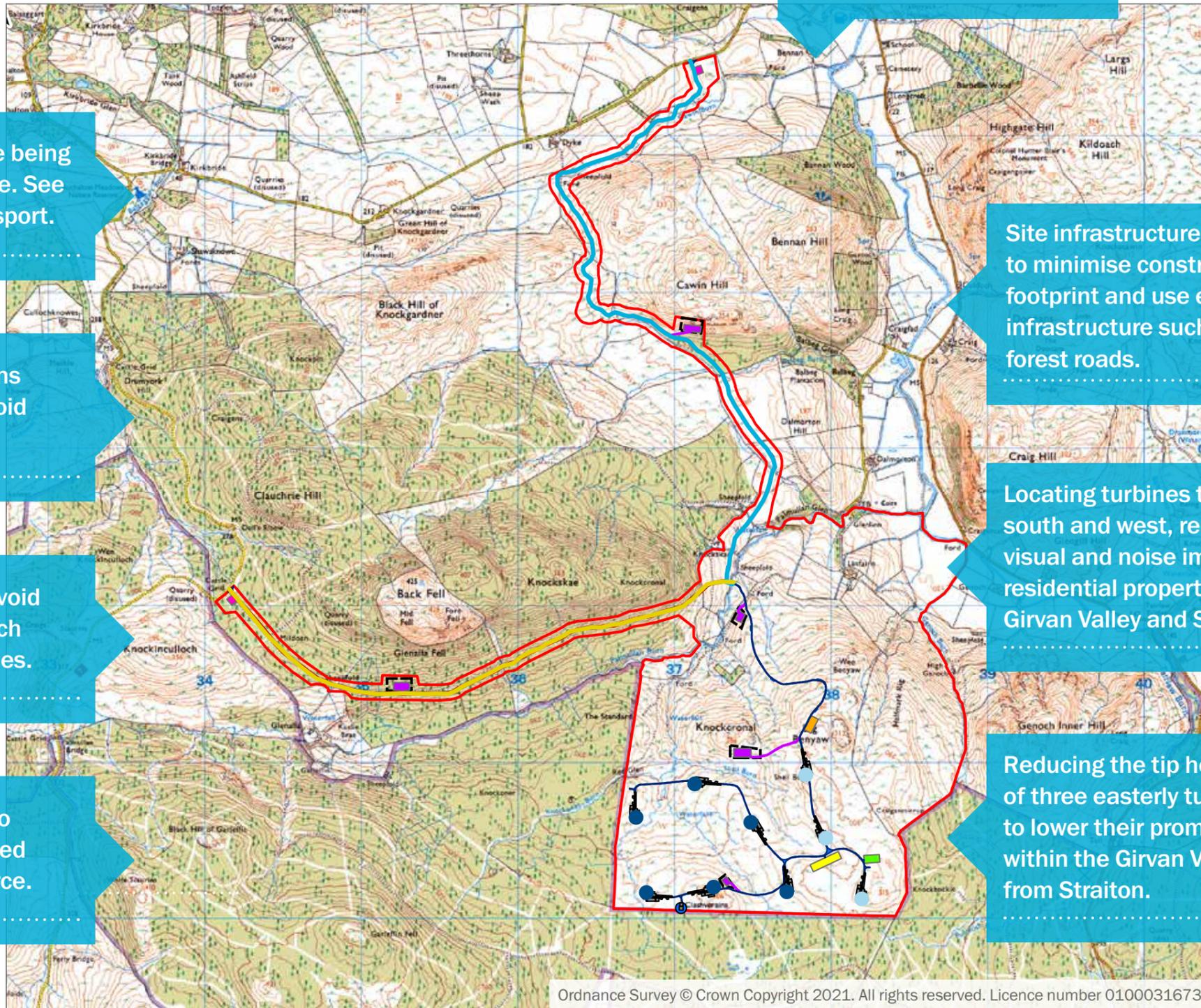
Turbines located to avoid protected species such as bats and water voles.

Turbines positioned to maximise the predicted available wind resource.

Site infrastructure revised to minimise construction footprint and use existing infrastructure such as forest roads.

Locating turbines to the south and west, reducing visual and noise impacts on residential properties in the Girvan Valley and Straiton.

Reducing the tip heights of three easterly turbines to lower their prominence within the Girvan Valley and from Straiton.



- Site Boundary
- Northern Access Route
- Western Access Route
- Proposed turbines 200m tip height
- Proposed turbines 180m tip height
- Temporary Borrow Pit Access
- Borrow Pits
- Borrow Pit Search Areas
- Substation
- Energy Storage
- Construction Compound
- Gatehouse Compound
- Permanent Met Mast

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Throughout the process Statkraft continuously engages with the local community and stakeholders about the emerging proposal.

1. SITE SELECTION	2. PRE-PLANNING	3. SUBMIT APPLICATION & AWAIT DECISION	4. CONSTRUCTION	5. OPERATION	6. DECOMMISSION
<p>(12 months)</p> <p>Extensive research to identify suitable sites: positive indicators include good wind speed and minimal environmental and technical constraints.</p> <p>No public engagement is carried out during this time because the site may not pass the criteria required for being suitable for development.</p> 	<p>(6 to 12 months)</p> <p>We request the view of the Scottish Government and South Ayrshire Council on the level of study required (known as “Scoping”). Scoping is sent to local and neighbouring Community Councils and consultees such as NatureScot, SEPA and Historic Environment Scotland.</p> <p>Our first consultation event was held between 19 May and 8 June 2021. In the Autumn of 2021 we are holding our second and last consultation event before we submit our planning application for Knockcronal Wind Farm.</p> 	<p>(12 months)</p> <p>An application is submitted to the Scottish Government, accompanied by a comprehensive Environmental Report showing the results of all studies undertaken. This is publicly available information and will be available on the project website.</p> <p>Interested parties and statutory consultees such as South Ayrshire Council can formally comment on the application.</p> 	<p>(12 to 18 months)</p> <p>If Knockcronal is approved, construction begins at least one year after consent.</p> <p>Construction typically takes 12-18 months and planning conditions are used to manage elements of construction.</p> 	<p>(30+ years)</p> <p>The turbines are managed by a regionally based maintenance team, and operations are managed in accordance with detailed planning conditions.</p> <p>We are committed to community benefit and shared ownership opportunities. A community fund is active throughout the lifetime of the project for worthwhile community initiatives.</p> 	<p>(12 months)</p> <p>At the end of the planning period, turbines are removed. A financial bond or parent company guarantee is put in place before construction starts to cover this cost.</p> 

The process of gathering good environmental data on a site is vital to designing a good wind farm, including turbine locations, access roads and other infrastructure. This is carried out by specialist environmental and technical consultants.

This information is incorporated into an Environmental Impact Assessment Report (EIAR) and will be available on the project website.

As part of designing this wind farm, advice and guidance has been sought from a range of regulatory and voluntary bodies including, but not limited to, South Ayrshire Council, NatureScot, Scottish Environment Protection Agency, Transport Scotland and Historic Environment Scotland.



Stream in the south of the site with wet banks containing large amounts of Sphagnum Fallax and Bogbean.

The results and findings will be detailed in the EIAR which is made public when we submit our planning application.

This report covers a range of areas including:

- **Landscape and Visual Amenity**
- **Ecology**
- **Ornithology**
- **Noise and Vibration**
- **Hydrology, Hydrogeology and Geology (including peat)**
- **Cultural Heritage**
- **Traffic, Transport and Access**
- **Socioeconomics**
- **Aviation and Telecommunications**
- **Forestry**
- **Shadow Flicker**
- **Climate**

What will the project look like?

As part of our studies, we have created images showing how the wind turbines could look from several locations.

As developers, our challenge is to find the right balance between maximising the electricity output of a site and carefully siting and designing the proposal to relate to the existing landscape.

Our studies will include a detailed assessment of the proposed development within a 45km study area.

As the proposed turbines are over 150m a night time assessment is also included. The viewpoint locations are agreed with Consultees.

Illustrations of all the viewpoints will be available when an application is submitted to the Scottish Government.

These studies will pay particular regard to:

- Effects on the landscape character of the context of the immediate area, as well as the character of the wider area.
- Effects on the special qualities of landscape designations such as the Girvan Water Valley Local Landscape Area, and the Merrick Wild Land Area.
- The amenity of residential properties near to the proposed development in the Girvan valley.
- The design in relation to Dersalloch and other proposed wind farms in the area.
- Effects associated with possible turbine lighting.



Please visit our [Predicted Views booklet](#) to see all the agreed viewpoint locations and the predicted views from several locations, including a night time view.

Viewpoint 2: Minor Road near Craig

Cultural Heritage



There are no designated heritage assets such as Scheduled Monuments within the site boundary. 34 non-designated heritage assets have been identified during the cultural heritage assessment. The Proposed Development Layout has been designed to avoid impacting these as far as possible.

There is the potential for up to four heritage assets to be directly affected by construction works within the Proposed Development area. Three features are located around the access routes. One remaining feature, two linear features which are old field banks and part of 'Knockonner' farmstead, overlap with the hardstanding of turbine 1.

Consideration continues to be given to providing signage or information boards about 'Knockonner' farmstead to be sited at an appropriate location on the 'Old Road through Straiton' Heritage Path. Statkraft will provide the funding for these boards should the relevant permissions be obtained.

All assets will be subject to an archaeological investigation and a watching brief during construction to document and record the features accordingly.



Remains of field bank at proposed turbine 1 location.

The setting of heritage assets within the wider landscape will also be assessed as part of the EIA. Particular attention will be given to Straiton Conservation Area, Blairquahn and Kilkerran Inventory Gardens and Designed Landscapes and Scheduled Monuments.

Ecology & Ornithology



Extensive surveys have been completed, including for habitats and vegetation, birds, protected mammals and fisheries with results compiled and assessed. Consultation feedback has also been received from Ayrshire River Trust, Fisheries Management Scotland, Galloway & Southern Ayrshire Biosphere, Galloway Fisheries Trust, NatureScot, and RSPB.

The surveys revealed that the habitat within the site is considered to be of low habitat risk for many protected species, with known presence of bats, badgers and water vole. The coniferous forestry area has the potential to provide a habitat for other protected species. As such, the design has ensured turbines have been located away from the forestry area and buffers have been placed around all watercourses.

The final design of the Proposed Development, with a smaller infrastructure footprint, has carefully considered the results of the surveys and consultee feedback, adjusting and refining the layout in order to minimise impact on sensitive habitats and protected species.

Noise



A noise assessment is being undertaken for the site in line with Government guidance. The full assessment will be submitted as part of the Section 36 Application.

Background noise monitoring has been carried out at a number of representative properties surrounding the site to capture the existing noise levels. These survey locations were agreed with South Ayrshire Council. The background noise levels will be used to determine noise limits that the Proposed Development would have to operate within. These limits are also informed by South Ayrshire Council and government guidance (ETSU-R-97).

The noise assessment will also take into account other wind farms schemes in the area, including the operating Dersalloch.

The noise assessments and resulting noise limits will be used to ensure that, if consented, the future operational site would operate within levels considered acceptable under the ETSU-R-97 assessment method (Government Guidance).

Transport

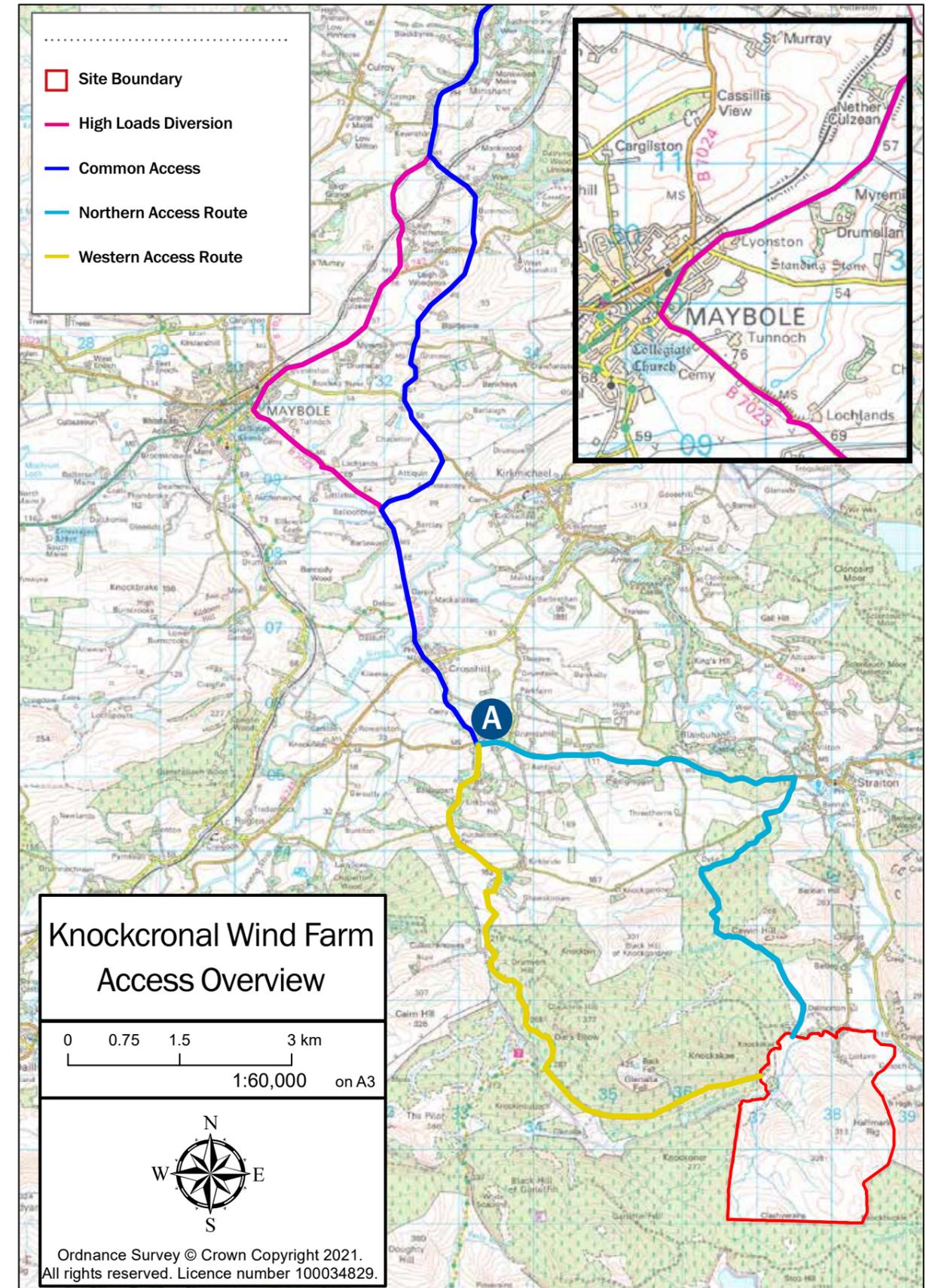


The access routes to site are shown opposite.

All transport to site will follow the blue route with the exception of high loads such as towers and nacelles. These loads will be diverted along the route drawn in pink to avoid a low bridge.

From point A we are considering two access routes to site to at this stage.

Within the EIA you will be able to view the transport assessment. This considers impacts of construction on local traffic and details all mitigation measures relating to traffic management. The transport chapter will also include a detailed review of the turbine component route to site and an outline of any road works required to facilitate the deliveries.



Climate Change



The Scottish Government has set a legally-binding target to achieve net-zero emissions by 2045. Developments such as Knockcronal Wind Farm are key to meeting this target. Whilst Scotland has continued to make good progress in reducing its greenhouse gas emissions, the need for low carbon energy supplies is paramount if Scotland is to achieve this net zero target.

By 2030, The Scottish Energy Strategy calls for 50% of ‘all energy’ to come from renewables. It emphasises that onshore wind is now one of the cheapest forms of electricity and will therefore continue to play an important role in this.

To quantify the emissions savings of Knockcronal Wind Farm, a ‘carbon balance’ assessment will be undertaken for the wind farm using Scottish Government guidance.

“We need more renewable energy, but why here?”

This is one of the most common questions we are asked when we propose a wind farm. This is a very understandable question, and the answer goes beyond the fact that Scotland has one of the strongest wind speeds in Europe. Earlier this year, we were pleased to be able to answer this question with the detail it deserves during a webinar hosted by the news website FutureNetZero. You may be surprised to know that our analysis shows less than 10% of land in Scotland is suitable for development of onshore wind.

[You can watch the full webinar here.](#)



HOW IS SCOTLAND DOING?

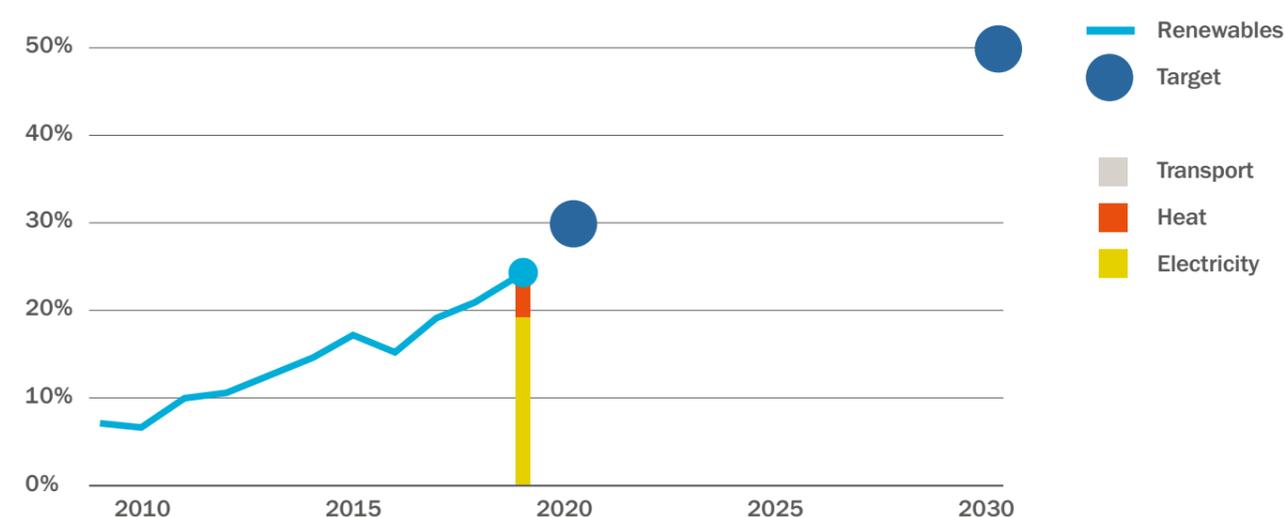
It’s great that Scotland now generates the equivalent of over 90% of its total electricity consumption by renewable energy. Reducing fossil fuel sources from heating and transport is essential to Scotland achieving net zero emissions by 2045, this project could contribute to that goal.

Read more here.

www.bbc.co.uk/news/uk-scotland-51088089

Scotland’s share of renewable energy (gross final consumption)

Scotland, 2009 - 2019



Source: [Scottish Energy Statistics Hub](#)

We would like our wind farms to be considered a local asset and want to talk with you about how we can bring new investment to your community.



Broadleaf planting areas at Andershaw Wind Farm. Photo credit: Jason Mackay at MacArthur Green.

“Since 2016, MacArthur Green’s experienced team of specialists have been carrying out ecological, ornithological and hydrological monitoring works for Andershaw Wind Farm’s Forestry and Habitat Management Plan (FHMP). The FHMP aims to reinstate and enhance blanket bog habitat, and provide a diverse woodland mix including broadleaved woodland to enhance floral and faunal species diversity. Through ongoing monitoring, we have found that these habitats are now developing well, and are helping to increase biodiversity of the site.”

Nicola Goodship PhD MCIEEM, Senior Ornithologist, MacArthur Green

Community Benefit Fund

We are committed to setting up a Community Benefit Fund in each of our project locations. Over £2 million has been generated from our UK projects to support local causes and innovative schemes.

Shared Ownership

Progress the opportunity, if there is local interest for local groups to have a financial interest in our project, with the support of organisations such as www.localenergy.scot/.

Local Investment

Work with local business groups such as the Chamber of Commerce to increase awareness of the opportunities in construction and operations.

Education & Enterprise

We welcome ideas on how our project can support local education and employment opportunities, and boost local businesses.

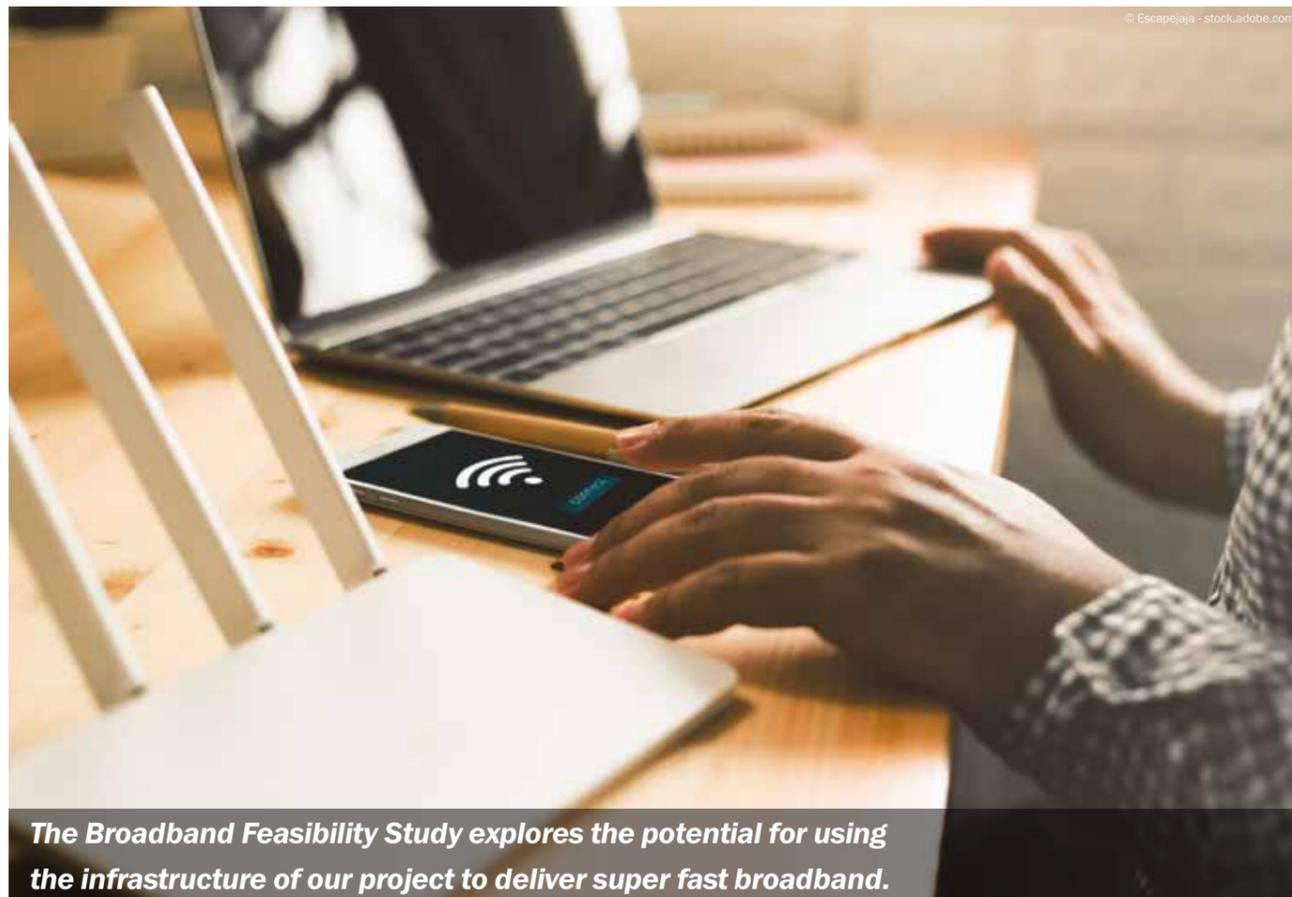
Wireless Broadband

We are progressing a feasibility study to identify the potential for improved broadband connection to support communities developing their own broadband initiatives.

We are always exploring ways in which we can provide positive benefits to local communities near our projects.

We are often asked by people if we can help deliver faster broadband, or even get them connected in the first place.

With this in mind, we have commissioned a feasibility study to investigate the potential at Knockcronal.



Our study will find out:

FEASIBILITY

We require a reliable broadband service to operate our wind turbines, and the study explores the **potential for improving local infrastructure** as the wind farm is connected.

FIBRE & FIXED WIRELESS

Fibre is the optimal connection, but fixed wireless broadband also offers opportunities to connect some locations that can be difficult or costly to reach.

A BENEFIT

Potential to provide **improved internet speeds for commercial and residential properties**. This could be partially or fully funded by the community benefit fund associated with our project.

NEXT STEPS

We would like to hear your views on the Broadband Feasibility Study and would like to continue a conversation with you as the project progresses. **If you would like to be kept up to date on the Broadband Feasibility Study please contact us, and register on the website for updates.**

Your Views are Important to Us

We are aiming to submit an application later this year, when all application documents will be publicly available.

We welcome your comments and feedback.

Please register your comments by completing a feedback form. In order for us to take your view into account before we submit an application, **please comment by 22 October 2021.**

Comments made will be taken into consideration but are not representations to the Planning Authority. There will be an opportunity for you to submit a formal response to the Scottish Government after the application has been submitted.

Thank you for attending the Knockcronal Wind Farm Exhibition.

We would like to keep you updated as our plans progress:



[Click here to complete the online feedback.](#)



Register for updates:
www.knockcronal.co.uk



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For more information
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Alltwalis Wind Farm, Carmarthen, South Wales. 10 turbines, 110m tip height