

Welcome to our Community Open Day

Thank you for visiting our Community Open Day. Here you will find a selection of information boards outlining the proposals for our two projects in the area:

- Shepherds' Rig Wind Farm near Carsphairn; and
- Stroanshalloch Wind Farm near Moniaive.

Please take your time to study the information and please do not hesitate to speak with any of the project team members who are here to answer your questions.

This is the second round of community open days on the projects. The first took place at a much earlier stage, in July 2013.

We are looking for your feedback which we would like to feed into the final layout for each site. If you would like to leave a written comment, please help yourself to a 'Voice Your Opinion' comment form, available from the reception desk.

There are several ways to obtain further information and to contact us:

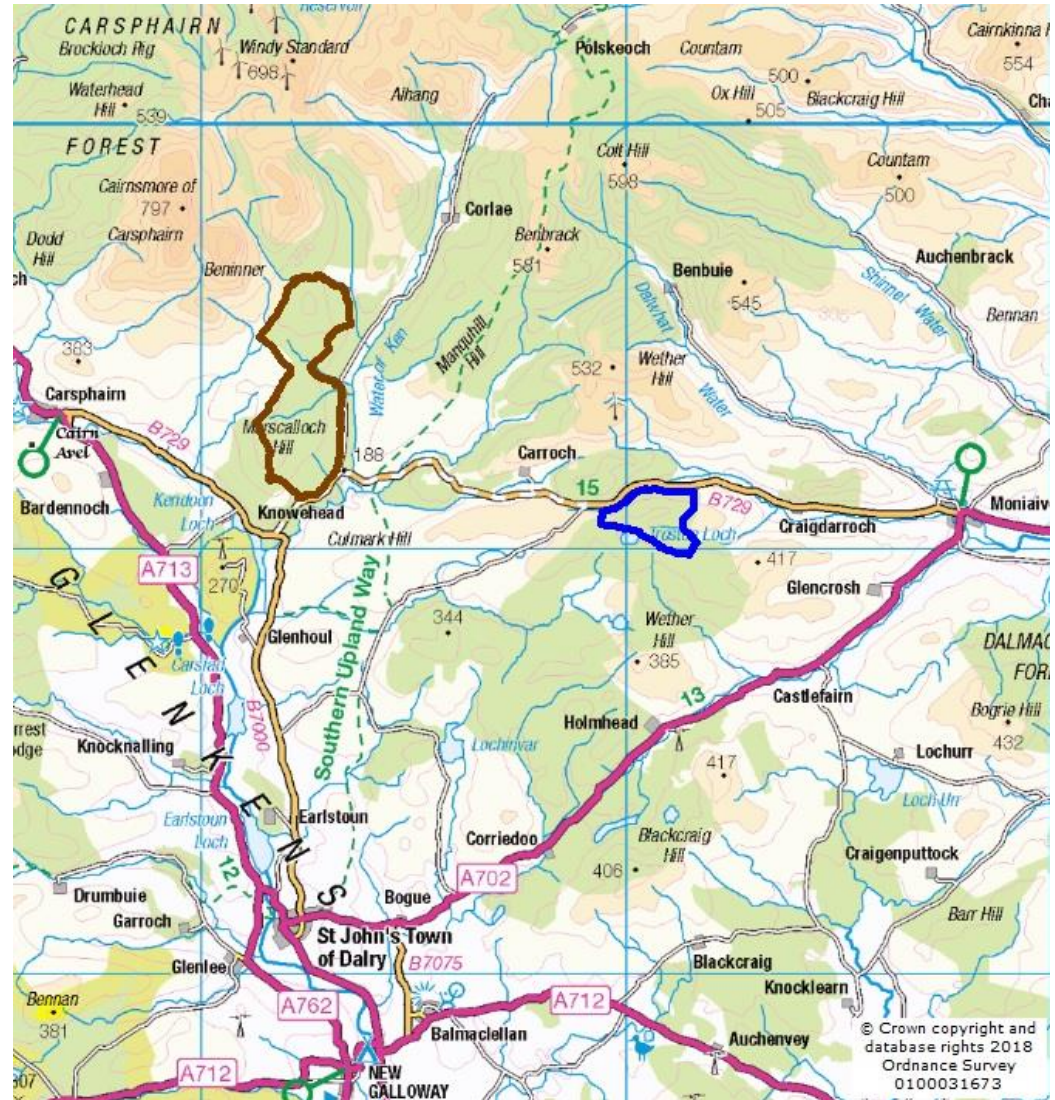
- Our websites www.shepherdsrigwindfarm.co.uk and www.stroanshallochwindfarm.co.uk will be updated to provide you with the latest information. We will also publish the Environmental Impact Assessment Report and associated documents, on the website once the applications have been submitted.
- Ring the freephone number **0800 980 4299**.
- Email us at info@shepherdsrigwindfarm.co.uk or info@stroanshallochwindfarm.co.uk
- Write to us using **Freepost Infinergy Ltd.**

Lochluichart Wind Farm, Highland
Image for illustrative purposes only



Background to the projects

- Environmental survey work began on the sites in 2012.
- Environmental Impact Assessment (EIA) scoping processes were undertaken in 2013, to establish the issues that needed to be studied.
- The first round of community open days took place in July 2013.
- Constraint analysis and layout design work continued during 2014 to ensure that environmentally sensitive and economically viable schemes could be designed for the sites.
- In 2015, assessment and design work on the projects was put on hold due to the uncertainty associated with the UK Government's proposed changes to the funding arrangements for onshore wind.
- In April 2017, following consideration of the economic viability of the projects in a post-subsidy environment, further environmental survey work commenced and this is ongoing.
- The projects have now reached a layout 'design chill' stage.



NOTE - Published for the purpose of identification only and although believed to be correct accuracy is not guaranteed.

Shepherds' Rig



Stroanshalloch



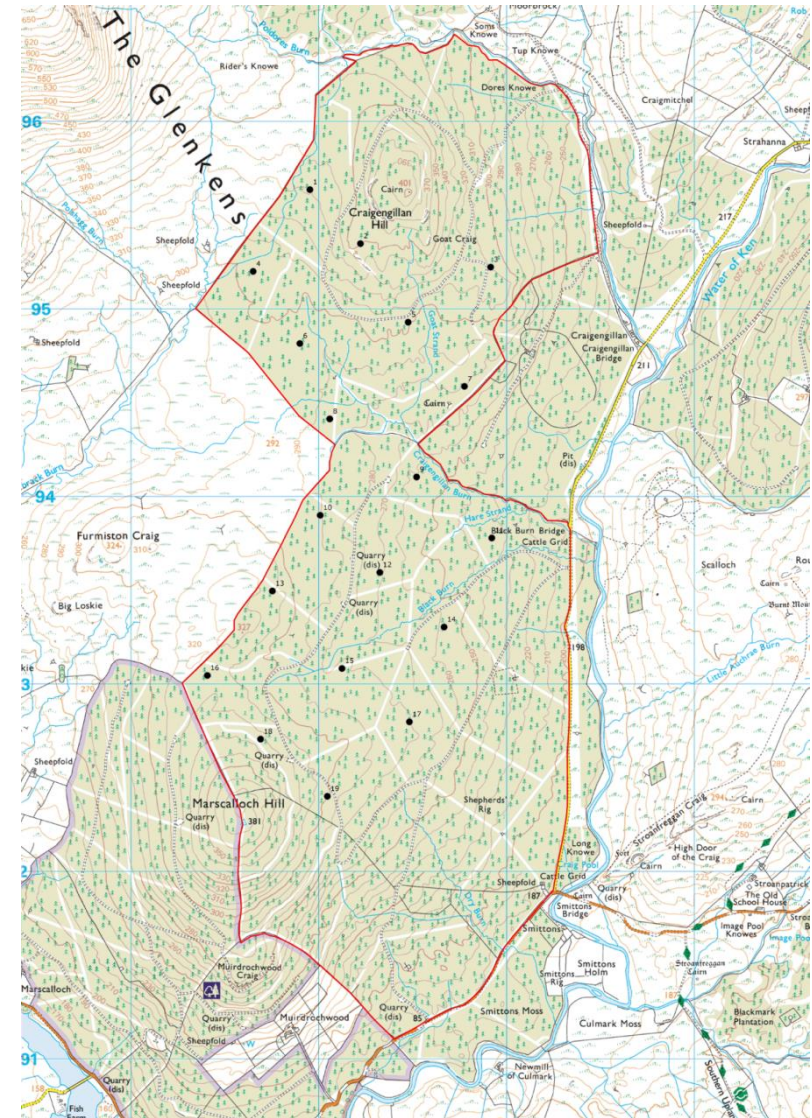
Shepherds' Rig

- The proposal has reached the 'design chill' stage and is likely to include:
 - 19 wind turbines with a tip height of 149.9m to tip and a rotor diameter of 117m
 - on site access tracks
 - crane hardstanding areas
 - a temporary construction compound
 - a sub-station and control building
 - cabling and borrow pit workings
- Each turbine would have a generating capacity of up to 4.2MW and the wind farm output would be up to 78.6MW.
- We are currently developing forest management plans which will help guide the final layout and will form part of the proposals.

Electricity & CO₂ equivalent*

- the 19 turbines with a combined installed capacity of 78.6MW would have the ability to produce enough green electricity to meet the annual demand of over 42,000 homes per annum.
- The wind farm would replace the emissions of approximately 85,000 tonnes of CO₂ each year.

*Source: RenewableUK. These calculations take the variable output of wind power into consideration and are considered industry standard.



Proposed 19 turbine scheme

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Stroanshalloch

- The proposal has reached the 'design chill' stage and is likely to include:
 - 7 wind turbines with a tip height of 149.9m to tip and a rotor diameter of 117m
 - on site access tracks
 - crane hardstanding areas
 - a temporary construction compound
 - a sub-station and control building
 - cabling and borrow pit workings
- Each turbine would have a generating capacity of up to 4.2MW and the wind farm output would be up to 29.4MW.
- We are currently developing forest management plans which will help guide the final layout and will form part of the proposals.

Electricity & CO₂ equivalent*

- The seven turbines with a combined installed capacity of 29.4MW would have the ability to produce enough green electricity to meet the annual demand of over 15,770 homes per annum.
- The wind farm would replace the emissions of approximately 32,000 tonnes of CO₂ each year.



Proposed 7turbine scheme

*Source: RenewableUK. These calculations take the variable output of wind power into consideration and are considered industry standard.

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Why these sites?

Scotland leads the way in harnessing renewable energy sources. However, the set target of 100% of electricity from renewables by 2020 cannot be met without further development of onshore wind as part of the mix of solutions. To ensure the landscape can accommodate this, projects need to be carefully sited.

These sites are large enough to accommodate projects that can deliver a good level of capacity towards the Scottish Government's targets.

The sites are well suited for wind energy because:

- they have a good average wind speed given the elevated locations;
- they are outside any known technical constraints including national landscape and ecological designations;
- the sites are distant from large settlements reducing the number of potential residential receptors. The turbines are also located a sufficient distance from closest residential properties such that residential amenity effects are considered to be acceptable;
- there are existing electricity lines within the locality that can be used to make grid connections; and
- the sites lie within landscape character type areas that are capable of accommodating wind farm development.

Shepherds' Rig Site

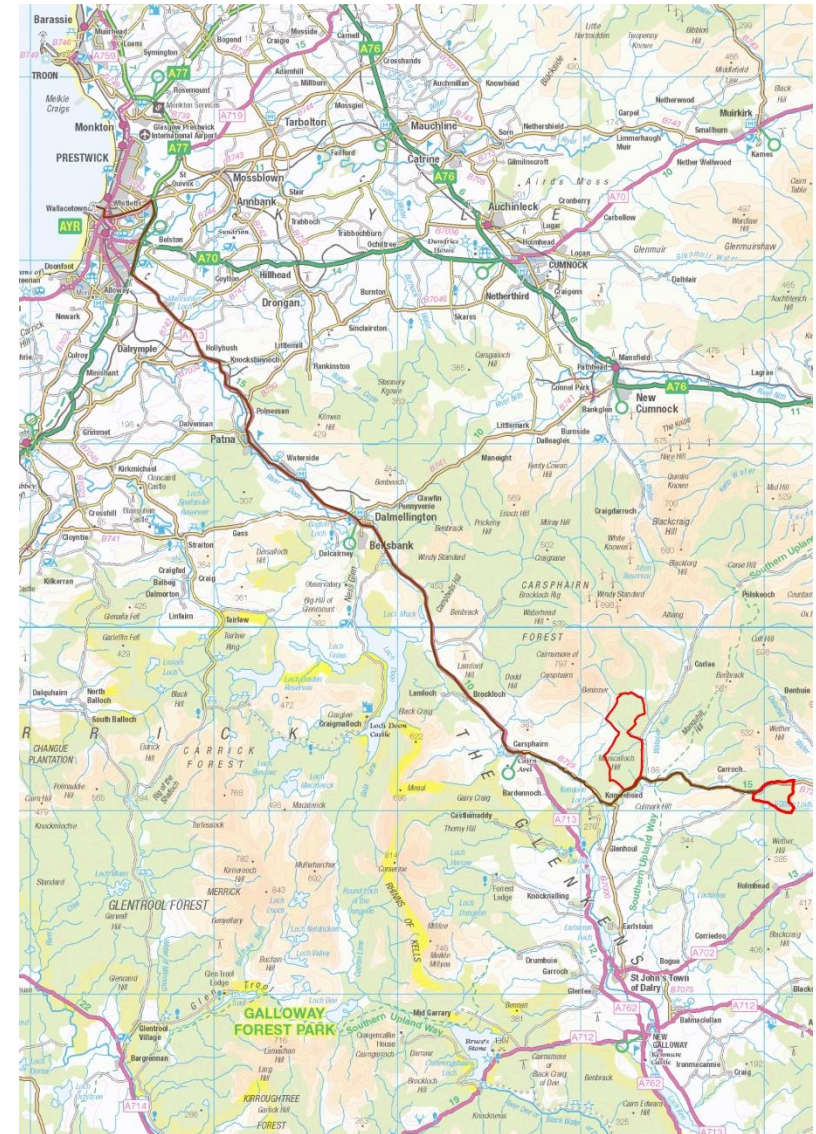


Stroanshalloch Site



Transport and access

- The preferred option to transport turbines to the sites is from the port of Ayr.
- Ayr Port has suitable facilities and experience to handle the turbine components and there is a proven transportation route from the port to the main road network.
- The following access routes are proposed for the sites, as illustrated on the accompanying map:
 - Shepherds' Rig – Port of Ayr via A77, A713 and then via the western end of the B729;
 - Stroanshalloch – Port of Ayr via A77, A713 and then via the western end of the B729 past the Shepherds' Rig site.
- The proposed wind farms would utilise existing roads leading into the sites and, where necessary, upgrading would occur.
- The proposed access track route minimises disturbance to residential properties.
- Journeys would be undertaken during off-peak hours and where necessary with a police escort.



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Ecology and ornithology

- Ecological surveys (protected species, fisheries, flora and habitats) and ornithological surveys have been taking place on each site since October 2012. Through this wide range of studies, a thorough understanding has been gained of both sites, of the potential implications of the proposed developments and how impacts can be avoided or mitigated.
- The sites lie in forestry plantation at varying stages of maturity and as a result the habitats are generally considered to be of limited ecological value.
- Detailed habitat surveys have been carried out to identify and map all habitats at the sites and detailed species surveys have also been conducted. The results of these surveys have been fed into the design process and ecological impacts have been minimised as far as possible through appropriate siting of turbines and associated infrastructure.
- The bird survey work has established that both sites and their immediate environs are used by red kite and goshawk, with osprey and hen harrier also present at Shepherds' Rig and peregrine present at Stroanshalloch. The frequency of occurrence was however low in all cases.
- The presence of peregrine falcon to the north of Stroanshalloch has shaped the layout and design on this site.



Common Lizard

Noise

There are two potential sources of noise:

- The turbine blades passing through the air as they rotate; and
- The rotation of the gearbox and generator in the hub of the turbine.

Standing next to a turbine, it is possible to hear a swishing sound as the blades rotate.

Turbine technology has advanced considerably in recent years and is constantly doing so, for example, certain turbine models no longer have a gearbox. As a result of these kinds of innovations, noise levels have greatly decreased.

Generally wind turbine noise levels increase as wind speeds increase however, so does the background noise level as the wind passes around the local area.

How is noise assessed and measured?

Wind farm noise is assessed using ETSU-R-97 "The Assessment & Rating of Noise from Wind Farms".

Noise is measured in decibels - dB(A) and a modern wind farm 500m away should not surpass 45 decibels.

Surveys of existing background noise levels have been undertaken at the nearest properties and noise predictions have been made based on the turbines likely to be used, together with that from other proposed and existing wind farms nearby. The noise levels from the project in combination with other proposals will be within the guideline limits.



Noise monitoring equipment

Socio-economic impacts

It is anticipated that during the construction phase the following economic benefits would be created:

Shepherds' Rig:

- Scottish economy: £52million Gross Value Added, generating 304 FTE* jobs lasting 18 months.
- Dumfries and Galloway economy: £19 million Gross Value added, generating 108 FTE jobs lasting 18 months for local people.

Stroanshalloch:

- Scottish economy: £19 million Gross Value Added, generating 114 FTE jobs lasting 18 months.
- Dumfries and Galloway economy: £7 million Gross Value Added, generating 41 FTE jobs lasting 18 months for local people.

*FTE = Full Time Equivalent



Wind turbine foundation

Community Benefit and Shared Ownership

Infinergy believes that the local community should benefit from the development of a wind farm and is committed to providing Community Benefits. We are very aware however that just giving a cash amount can create its own challenges for the communities involved and would like to try and make sure the benefits are spread out via a variety of initiatives that will help create a vibrant and thriving place to live and work. This area of Dumfries & Galloway has had a lot of experience in the ways in which community benefit can be spent and we would appreciate hearing your ideas.

For example, should the wider package support:

- Investment in skills and education?
- Investment in business enterprise?
- Tourism infrastructure, e.g. mountain bike trails, investment in access, signage etc?
- Energy saving measures for local people?
- Affordable housing?

In addition to any specific initiatives, typically a set amount per installed megawatt will be donated to a trust fund. This fund will normally receive revenues from the project at the end of each operational year of the wind farm's lifetime, usually 25 years.

Whatever the right solution for your area, we will work closely with you to make sure those benefits are realised.

In addition to any Community Benefit attached to each project, Infinergy would like to investigate the possibility of some type of community ownership at both sites.

The Scottish Government has set an ambitious target of 500MW to be in the hands of communities by 2020. Infinergy acknowledges the possibilities of working with communities and would like to play a constructive role in empowering communities to become partners in our wind farms should they wish to.

Examples of this approach are already working successfully, generating renewable energy and providing a sound investment for local communities.

Please feel free to write any ideas that you have on how community benefit could make a positive contribution to your local community on the 'post-its' provided and stick them up on this panel. Alternatively, please complete a 'Voice Your Opinion' comment form which is available from the reception desk.

