RWE npower renewables welcomes you to our exhibition about the proposed Glenmount Wind Farm.

The purpose of this exhibition is to:
- explain why we have identified this site for a potential wind development
- describe the various studies being undertaken to assess the potential environmental effects
- display visual representations of what the development might look like
- encourage comments, suggestions and feedback on the proposal
- give local people the opportunity to talk to us directly and ask questions.

The development of Glenmount Wind Farm is ongoing and we expect to refine the project following this exhibition and conclusion of our own studies and assessments.

The final details of the proposal, which will include an Environmental Statement (ES), will be presented in a planning application to the Scottish Ministers. We will also provide feedback to the local community and advise you of any changes we have made in our next newsletter.

Thank you for taking the time to attend this exhibition.
WHO ARE WE?

RWE npower renewables is the UK subsidiary of RWE Innogy. We are one of the UK’s most experienced wind farm developers and operators.

We have a strong track record of working closely with the communities where our projects are located. We engage with the community from the outset of our projects and continue to work with local people and organisations throughout the development process and once the project is operational.

We have offices in Inverness and Perth and employ around 50 staff in Scotland.

In the UK we operate 21 hydro power stations, 27 onshore wind farms and 2 offshore wind farms, including the UK’s first major offshore wind farm, North Hoyle.

Construction is currently underway on our offshore wind farm, Gwynt y Mor in Liverpool Bay off the North Wales coast. A new state-of-the-art biomass facility is being constructed at Markinch in Fife to supply steam and electricity to Tullis Russell papermakers.

In Scotland, since 2010, we have placed £125 million worth of contracts with Scottish businesses, and in 2012 we were the proud winners of the Scottish Green Energy Award for contribution to supply chain development.

For more information about RWE npower renewables please visit our website at www.npower-renewables.com
WHY WIND POWER?

The Scottish Government has set a target of generating 100% of its electricity from renewable sources by 2020, and whilst other renewable technologies are in development, a significant proportion of the targets will be delivered by onshore wind.

The targets in Scotland reflect the commitments made in policy and legislation at UK, European and international levels to develop renewable energy sources and tackle climate change.

The UK has around 40% of the wind resource in Europe and the biggest opportunities to benefit from this are in Scotland. Onshore wind is expected to be worth £0.78bn by 2020 (Biggar Economics, 2012) and the sector offers huge opportunities for investment and employment. The renewable energy sector in Scotland already provides over 11,000 full time equivalent (FTE) jobs, with onshore wind the largest employer by generation type (Scottish Renewables, 2012).

Findings of a YouGov poll commissioned by Scottish Renewables (Feb 2013) suggest that 62% of Scots would be generally supportive of a large scale wind project in their local council area. This is not dissimilar to the findings of Progressive Partnership research we commissioned in December 2012 in the Dalmellington and Straiton area which revealed that only 27% of people questioned were opposed to having a wind farm locally.

Windy Standard Wind Farm, Dumfries & Galloway
WHY GLENMOUNT WIND FARM?

The Glenmount site is located on agricultural land approximately 6km to the south west of Dalmellington, to the west of Loch Doon and is divided by South Ayrshire and East Ayrshire Councils’ administrative boundary.

The area proposed for the development is predominantly open hillside located on the south western slopes of the Big Hill of Glenmount. A number of water courses within the proposed development area flow towards Loch Doon, Loch Finlas and Derclach Loch. The site is currently used for sheep grazing.

Glenmount Wind Farm has been selected by RWE npower renewables to progress as a suitable site for the following reasons:
- high wind speeds at the site
- no statutory designations for sensitive habitats of ecological value
- scope to reduce visual impact using the landform to the north of the development area

RWE npower renewables currently operates Windy Standard Wind Farm in the hills above Carsphairn Forest close to the proposed Glenmount site. Windy Standard was the second largest wind farm in Scotland when it became operational in 1996. We have established a good relationship with the communities surrounding Windy Standard where the community benefit fund has contributed to many worthwhile local initiatives.

Photograph of the proposed Glenmount Wind Farm site looking east
ENERGY GENERATION

When do wind farms generate electricity?
A modern wind turbine is expected to produce electricity up to 85% of the time. However the output of a wind turbine will vary depending on the wind speed. Wind turbines can start to generate electricity at wind speeds of four to five metres per second (m/s) (known as the ‘cut in’ wind speed) and continue to generate up to wind speeds of around 25m/s (‘shut down’ wind speed). The wind turbines will meet maximum power output at wind speeds of around 27 to 37 miles per hour. A modern wind farm will on average generate enough electricity to potentially meet the demands of more than one thousand homes over the course of a year.

The application will request consent to operate a wind farm for 25 years. The nature of long-term wind patterns in the UK means that energy from wind is suited to deal with UK electricity demand. Onshore wind speeds are typically higher in winter than summer, and also during the afternoon and evening. These patterns broadly coincide with patterns of electricity demand.

<table>
<thead>
<tr>
<th>Project summary</th>
<th>The proposal at a glance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of turbines</td>
<td>Approx. 22 turbines</td>
</tr>
<tr>
<td>Tip height</td>
<td>Up to 130m</td>
</tr>
<tr>
<td>Turbine capacity</td>
<td>Up to 3MW per turbine</td>
</tr>
<tr>
<td>Total installed capacity</td>
<td>Approx. 66MW</td>
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</tbody>
</table>

Megawatt (MW)
The Mega Watt is the unit of measurement of the electrical power output of a wind farm.

1MW = one million watts or 1000 kilowatts (kW).

Megawatt/hour (MWh)
This is the amount of electrical energy that is generated if a one megawatt wind turbine operated at maximum capacity for one hour (1MW x 1Hour).

1MWh = 1000 kilowatt hours (kWh).

When we pay our electricity bill we pay for the number of kWh (or units) we have used. One unit of electricity (1kWh) is the amount of electrical energy that would be used if a 1kW electric fire was switched on at full power for one hour.

Capacity Factor
The capacity factor of a wind farm is the % of the theoretical maximum which would be generated if the wind farm operated at its maximum power output all of the time. Capacity factor is not the same as Efficiency. In Scotland the average capacity factor is 29%.

Efficiency
The efficiency of a turbine or wind farm is a measure of how much fuel (wind) is converted to energy (electricity) i.e the ratio of energy input to energy output.

Electricity Output
Assuming a 29% capacity factor, a 2.5 MW turbine would be expected to generate around 6,351 MWh of electricity each year (2.5MW x 365 days x 24 hours x 29%).

HOW A TURBINE WORKS

Wind turbine blades are shaped with an aerofoil cross section (similar to an aircraft wing) and this causes air to move more quickly over one side than the other, which results in movement of the blades and a rotational force, or torque, to be generated.

The rotor is connected to an electricity generator inside the turbine which converts the torque into electricity. The electricity is then fed into a transformer located outside the turbine which steps up the voltage to reduce losses in transportation.

The electricity then travels through underground cables to a small sub-station (usually within the wind farm site) where the voltage is increased again through further transformers and exported to the local grid.
THE DEVELOPMENT PROCESS

Glenmount Wind Farm is still at the development stage and work towards the Environmental Impact Assessment (EIA) is ongoing.

The EIA is being carried out by independent consultants who are undertaking detailed environmental studies of the proposed site. The assessment will help us gain a better understanding of how the site should be designed to minimise its impact on the surrounding environment.

Results of environmental studies, the impact assessment, proposed mitigation, and the final layout of the wind farm will then be set out in the Environmental Statement (ES) a document which will be submitted as part of the planning application.

The ES will be available for consultation and review once the planning application is submitted.

The ES allows consultees and decision makers to take account of any potential environmental impacts when considering whether or not a site should be granted planning permission.

Studies underway include, amongst others:
- landscape and visual impact
- ecology
- ornithology
- hydrology, geology and peat
- noise
- archaeology and cultural heritage
- communication, aviation and defence
- traffic and transport.
ENVIRONMENTAL IMPACT ASSESSMENT – RESULTS OF STUDIES TO DATE

Landscape and visual

Work is currently underway on the Landscape and Visual Impact Assessment (LVIA). The purpose of this assessment is to consider:

– effects on landscape caused by changes, as a result of the proposed development
– effects on visual amenity caused by changes in the appearance of the landscape as a result of the development in particular views from settlements, roads and popular recreational locations.

To date our assessments have identified that the southern part of the Glenmount site sits within a shallow bowl and is partially enclosed. By siting the turbines within this bowl and using the Big Hill of Glenmount and other nearby hills as a screen, we believe it is possible to reduce the potential visibility of the wind farm.

Some visibility of the wind farm and some effects on the landscape will however be inevitable but as the survey and assessment work continues, we will discuss how best to address these issues with our landscape consultant.

The design and layout of the wind farm is a key part of the development process. We want to create a design which:

– appears logically sited and well designed
– reduces visual impact on local views, particularly from the villages of Bellsbank, Dalmellington and Straiton as well as local roads, in addition to views around Loch Doon
– reduces impacts on the Craigengillan Garden and designed landscape
– relates to the scale and landform of the site and surrounding area
– minimises landscape and visual impacts from the wider surrounding area including views from the Galloway Forest Park
– takes account of other environmental technical considerations.

The layout presented today is being reviewed by the landscape team as part of the assessment process. This will evolve as work continues on the project.

Looking north east towards the Big Hill of Glenmount
The photomontages exhibited today are produced from a sample of the representative viewpoints which will be included in the ES. The viewpoints have been identified and selected through consultation with East Ayrshire and South Ayrshire Councils and Scottish Natural Heritage (SNH).

The impact assessment will not be limited to just Glenmount but will also consider cumulative effects in relation to existing, consented and proposed wind farms in the area. This is an important element of the assessment given the proximity of some of these developments to Glenmount and one which will be given full consideration.

35 km of Zone Theoretical Visibility
ENVIRONMENTAL IMPACT ASSESSMENT –
RESULTS OF STUDIES TO DATE CONTINUED

Ecology
Ecological surveys (habitat, flora and fauna) have been carried out at the Glenmount site since 2010 and are continuing.

These surveys have identified some limited areas of more sensitive bog and freshwater habitat (in addition to groundwater dependent habitat) which are being considered as part of the design process.

Protected species surveys have been undertaken for otter, water vole, badger and bats. The surveys indicate that otter and badger are present within the survey area, although not in areas where main site infrastructure is proposed. Several species of bat have been recorded using the site for foraging and commuting, while some bat roosts were recorded outside of the site area.

The location of these protected species and their habitats are being used to inform the design of the wind farm to minimise impact. Habitat enhancement measures are also being considered as part of the scheme design in consultation with amongst others Scottish Natural Heritage and the Scottish Environment Protection Agency.

Ornithology
Ornithological surveys have been undertaken since 2009 and are ongoing to identify bird species using the site.

These surveys have identified, amongst other species, black grouse using parts of the site for lekking (courtship displays). We will be taking account of these locations during the site design and also when planning construction activities on the site. In addition to environmental protection measures, habitat enhancement measures are also being considered as part of the scheme design (with specific focus on black grouse) in consultation with Scottish Natural Heritage (SNH) and Forestry Commission Scotland.

Otter (courtesy of Peter Stronach)

Black grouse
Noise
The noise from wind farms and noise assessments for proposed wind farms must comply with government guidance specific to wind farm noise. For a site located within the vicinity of residential properties, guidelines state that operational wind farm noise limits should be taken from site specific background levels.

Background noise monitoring is being undertaken at four representative locations surrounding the site, all of which were agreed through consultation with both South Ayrshire and East Ayrshire Councils’ Environmental Health departments.

The findings of the noise surveys will be taken into account during the wind farm design process to ensure noise levels at residential properties will be within the required limits to ensure the wind farm will comply with current government guidance.

The noise assessment also considers construction noise (inclusive of decommissioning). The construction noise assessment will be undertaken in line with the relevant standards, guidance and policy.
ENVIRONMENTAL IMPACT ASSESSMENT – RESULTS OF STUDIES TO DATE CONTINUED

Hydrology
The development site is bounded by three significant water bodies:

– Derclach Loch
– Loch Finlas
– Loch Doon

and two water courses:

– the River Doon
– the Water of Girvan.

A hydrology assessment is being undertaken to consider the potential impacts associated with construction and operation of the development on these watercourses and any mitigation that may be required. A 50m exclusion zone for the placement of turbines will be maintained around all watercourses.

Consultation is currently being undertaken with Scottish Water given the proximity of the site to water treatment works and associated public water supply located at Loch Braden to the south west of the site. Mitigation measures to reduce risks to water supplies are being incorporated into the design of the project and further measures will be employed during construction. Water quality will be monitored during construction to ensure impacts are minimised.

Peat & Geology
An initial peat probing exercise has found that the peat varies in depth and quality considerably across the site. The wind farm is being designed to avoid the deepest areas of peat where possible.

Initial surveys indicate that sufficient rock can be sourced from within the site to build the wind farm. This will reduce the requirement to import materials to the site helping minimise any disturbance to communities.

View looking south towards Derclach and Finlas Lochs
ENVIRONMENTAL IMPACT ASSESSMENT – RESULTS OF STUDIES TO DATE CONTINUED

Archaeology and Cultural Heritage
A cultural heritage study is being undertaken to identify any features of historical significance that could be affected by the construction and operation of the wind farm. These include designated sites, such as scheduled monuments and listed buildings, as well as a much larger number of undesignated sites of lesser importance. Archaeologists have both studied historic maps and aerial photographs and undertaken a walk-over survey to identify any features not already recorded in public databases.

The development site contains one scheduled monument, a prehistoric homestead, and a number of archaeological sites typical of the region, such as groups of prehistoric clearance cairns and deserted post-medieval farmsteads. Along the shores of Loch Doon are the remains of an aerial gunnery school established during the First World War.

The wind farm will be designed to avoid these features wherever possible, and appropriate measures taken to ensure that any unknown, buried archaeological remains are identified and recorded before or during construction.

The study will also include a thorough assessment of potential effects on the settings of nationally important heritage assets in the surrounding landscape. These include prehistoric funerary cairns, the medieval Loch Doon Castle, several deserted post-medieval settlements, and the inventory designed landscape at Craigengillan and the conservation areas of Dalmellington and Straiton, which include a number of listed buildings.

Socio-economics and tourism
The Environmental Statement (ES) will include an assessment of potential socio-economic impacts of the proposed Glenmount Wind Farm. A baseline analysis of the local economy will be undertaken using published economic statistics, which will inform an assessment of the local economy, employment opportunities and contract opportunities for businesses during all phases of the wind farm’s development.

The assessment will also consider potential effects on other sectors, including tourism. This will take account of an analysis of the local tourism economy, including consideration of the main drivers of tourism, attractions, tourist routes and tourism accommodation and published research on wind farms and tourism.

Loch Doon Castle
EVOLUTION OF THE SITE LAYOUT

The Glenmount Wind Farm layout is being designed with every effort to achieve the best ‘fit’ with the local landscape and any environmental constraints identified on site.

Environmental constraints
The design of the Glenmount Wind Farm layout is continually evolving as we gather more information from surveys which we are undertaking as part of the Environmental Impact Assessment (EIA) Process.

To date, several design iterations have been considered. The initial 26 turbine layout considered at the scoping stage, factored in the following constraints amongst others:

- 1km buffer from residential properties and proposed caravan park
- avoidance of higher ground to the north of the Big Hill of Glenmount (for landscape reasons)
- 50m buffer between all watercourses and turbines
- turbine spacing based on a south westerly prevailing wind direction.

![Initial 26 turbines layout considered at scoping](image-url)
Since we carried out scoping, further environmental survey information has been factored into the design. We have relocated a number of turbines and removed three others to avoid ecology and ornithology constraints. Additionally, a review of the layout from a landscape perspective has resulted in the removal of a further turbine from our original plan.
EVOLUTION OF THE SITE LAYOUT CONTINUED

The wind farm layout is still evolving as more detailed surveys are undertaken. The current layout, shown below, comprises 22 turbines with a tip height of up to 130m. This is the layout on which the photomontages have been produced and takes into account all the environmental and technical constraints to date.

In addition to the environmental information we have gathered, the feedback we receive from the public at this exhibition will also inform the final wind farm design.
CONSTRUCTION PHASE

The main construction period is expected to last up to 2 years. This will include installation of all wind farm infrastructure, such as construction of an access track, establishment of borrow pits, laying of underground cables, construction of sub-station and control building, installation and commissioning of the turbines.

For much of the construction period the activity will take place within the site itself.

A site specific Construction Method Statement (CMS) will be drawn up in consultation with the Scottish Environment Protection Agency (SEPA) before the main contractor has been appointed and prior to the start of the construction. A draft of the CMS will be submitted with the planning application.

The access tracks will be left in place after construction of the wind farm is completed to provide access for maintenance, repairs and eventual decommissioning of the wind farm. During the construction period only, access to the site will be restricted to ensure the health and safety of the site personnel and the general public.
Transport and Access
We are currently liaising with South Ayrshire Council’s Road and Transport Department regarding access. It is proposed that the access for all wind farm construction traffic, including vehicles delivering turbine components, will be taken directly from the Newton Stewart Road (B7045).

The assessment will consider the potential impacts of traffic on road safety and condition of the existing road infrastructure. We will seek to reduce the number of traffic movements and will explore options such as the use of borrow pits to source aggregates instead of importing new materials.

If granted planning permission, a Construction Traffic Management Plan will be agreed with South Ayrshire Council. This will include details of construction vehicle routing with associated traffic management proposals and set out a framework for controlling and responsibly managing the potential construction traffic impacts.
CONSTRUCTION PHASE CONTINUED

Contracting

The principal wind farm construction contracts will include civil works, electrical works and turbine supply and we will follow a competitive tender process for all contracts. The main contracts are normally appointed to a chief contractor who will then choose appropriate subcontractors. Consideration will be given to locally based companies where possible. In the past, local companies have been ideally situated to successfully tender for our contracts.

Based on our previous experience, it is reasonable to assume that a significant proportion of these contracts have the potential to be awarded to Scottish based companies and indeed those based in Ayrshire.

Local companies who feel they have the appropriate skills or require information on our procurement processes can submit their details to renewablessuppliers@rwe.com or to one of our representatives at the exhibition. It should be clear however, that any contracts will need to be tendered. Supplier details will be included in a ‘potential suppliers’ list which will be passed on to the wind farm project manager once the project receives planning consent.
Ensuring communities receive a lasting benefit from hosting an RWE npower renewables’ project in their area is an integral part of any development we undertake.

Throughout the UK, we have over 15 years’ experience investing in communities neighbouring our operating wind farms. Over the last three years RWE npower renewables has invested more than £2 million into communities across the UK, with decisions on how the money is spent being made by local people. Our funding gives communities the resources and flexibility to plan for the future and realise their ambitions. It is being used to support a wide range of projects including:

- funding to improve community buildings, creating space for groups to meet and events to take place, therefore improving community cohesion
- funding for community energy projects, helping to cut CO₂ emissions, reduce energy bills and in some instances creating an income stream for communities
- funding for training grants to help improve local skills and increase employment opportunities
- funding social enterprises, helping develop projects with reduced dependency of grant funding.

Each of the communities in which we operate is different. Our community investment team will work with local people and organisations to develop a bespoke funding package that meets their requirements.

If we are successful in gaining planning consent for Glenmount Wind Farm, we are committed to providing a community investment package that will consist of annual payments for the lifetime of the wind farm (up to 25 years). The exact value of the package at Glenmount Wind Farm will vary depending on the final size and scale of the development. We are also committed to consulting with the communities neighbouring the site regarding how this fund should be used to support the community.

Based on the surveys we have undertaken to date, we believe the majority of people living in the Dalmellington and Straiton area recognise the need for community investment. In particular, you identified the following as being the most important areas:
- investment in facilities for local children
- investment in skills and education
- investment in support for local businesses.

We are determined to offer a flexible approach to community investment so that any package can be tailored to best meet the needs of the community which it should serve. We aim to work with each community to establish the appropriate structure and administrative support to achieve the best value from the community investment fund. For example, where appropriate we will work with partner organisations to help deliver skills programmes or apprenticeships.

As a company we are committed to listening to local communities. If you would like to tell us your views on how a Glenmount Wind Farm Community Fund could be best delivered, please fill in one of our comments forms, or e-mail us: community.investment@rwe.com.

Carsphairn community garden
COMMUNITY INVESTMENT IN ACTION

Community Investment in action in your communities
Our community investment programme in association with our operational Windy Standard Wind Farm is already making a positive difference to the communities of Carsphairn and New Cumnock. More than £250,000 will be invested into these communities over the operational lifetime of the wind farm.

In 2012 the Carsphairn Renewable Energy Fund Limited (CREFL) awarded grants to Carsphairn Community Garden, the Carsphairn Show and supported the running costs of the local heritage group. Lagwyne Village Hall also receives ongoing funding for the hall’s equipment and maintenance as well as a revenue grant that helps cover running costs such as insurance, energy bills and cleaning. Educational grants were awarded to students over the age of 16 and Glenkens Community and Arts Trust received a contribution towards printing and coordination of Glenkens Gazette. Carsphairn Heritage Centre also receives a revenue grant through CREFL thus improving opportunities for tourists.

In New Cumnock recent awards have also supported a variety of local community and charitable groups including activities for school children during school holidays and a wide variety of sports and social groups. Awards were used towards running costs, special events and for equipment and have benefited residents of all ages.

Pupils at Methven Primary School in Perth learning about climate change. Workshop provided by RWE npower renewables
Carsphairn Heritage Centre
Community involvement and consultation is a key element of the RWE npower renewables’ project development process. RWE npower renewables is committed to involving the local community throughout this process.

The consultation process started in January 2013 when Dalmellington and Crosshill, Straiton and Kirkmichael Community Councils were informed of the proposed development as part of the scoping exercise with Scottish Ministers. We are committed to keeping the community councils informed of our proposals to ensure we understand the views of the communities in which we hope to work. Following completion of the baseline surveys we are now at a stage to provide meaningful information about our proposals and an initial layout informed by the survey work at this public exhibition.

A newsletter was issued in May 2013 to provide information about our proposal, provide an opportunity for individuals to register comments and to raise local awareness of the scheme.

We have also been in consultation with East Ayrshire and South Ayrshire Councils, Scottish Natural Heritage, Scottish Environment Protection Agency, Historic Scotland and Scottish Water, amongst others. This continuing consultation will help shape our design and development process.

Consultation is ongoing and RWE npower renewables continues to seek your views in the following ways:
- at this exhibition by providing comments and suggestions either directly or via the questionnaire or comments box
- by email at glenmount@npower-renewables.com
- through our newsletters.

These boards will also be available to view and download at our website on www.npower-renewables.com/glenmount
CONSULTATION CONTINUED

Next steps
- completion of the environmental studies, subsequent Environmental Impact Assessment (EIA) and production of the Environmental Statement (ES)
- submission of the application and ES to the Scottish Ministers (anticipated by the end of 2013)
- a formal newspaper advertisement in the local press will notify members the public of the application submission
- consultees and members of the public will have four weeks from the date of the advertisement to formally provide comments to the Scottish Ministers.

Both East Ayrshire and South Ayrshire Councils will have four months to provide comments to Scottish Ministers on the application.

At the same time as submitting the application, RWE npower renewables will:
- send out a second newsletter to all residents within a 10km radius of the turbines
- inform Dalmellington and Crosshill, Straiton and Kirkmichael Community Councils that the application has been submitted
- it is anticipated that Glenmount Wind Farm will be determined by mid-2014.

The overall scale and layout of the Glenmount Wind Farm will not be finalised until all environmental studies are complete and feedback from the public exhibition is received and considered. This will inform the final design and layout of the proposal.

At this stage no application has been submitted to the Scottish Ministers in relation to this proposal. Any comments made to RWE npower renewables at this time are not representations to the Scottish Ministers. If we submit a formal application there will be a further and formal opportunity to make representations directly to Scottish Government Ministers.

Your comments are important
Before leaving this exhibition, please take the time to fill out our questionnaire or offer additional comments. The information you provide will be helpful to us, both in assessing the acceptability of the Glenmount Wind Farm proposal illustrated at this exhibition, and judging how useful this exhibition has been to the local community. The views and comments of everyone are important.