CATAMOUNT ENERGY LIMITED

force 9 energy

Berry Burn Windfarm Environmental Statement

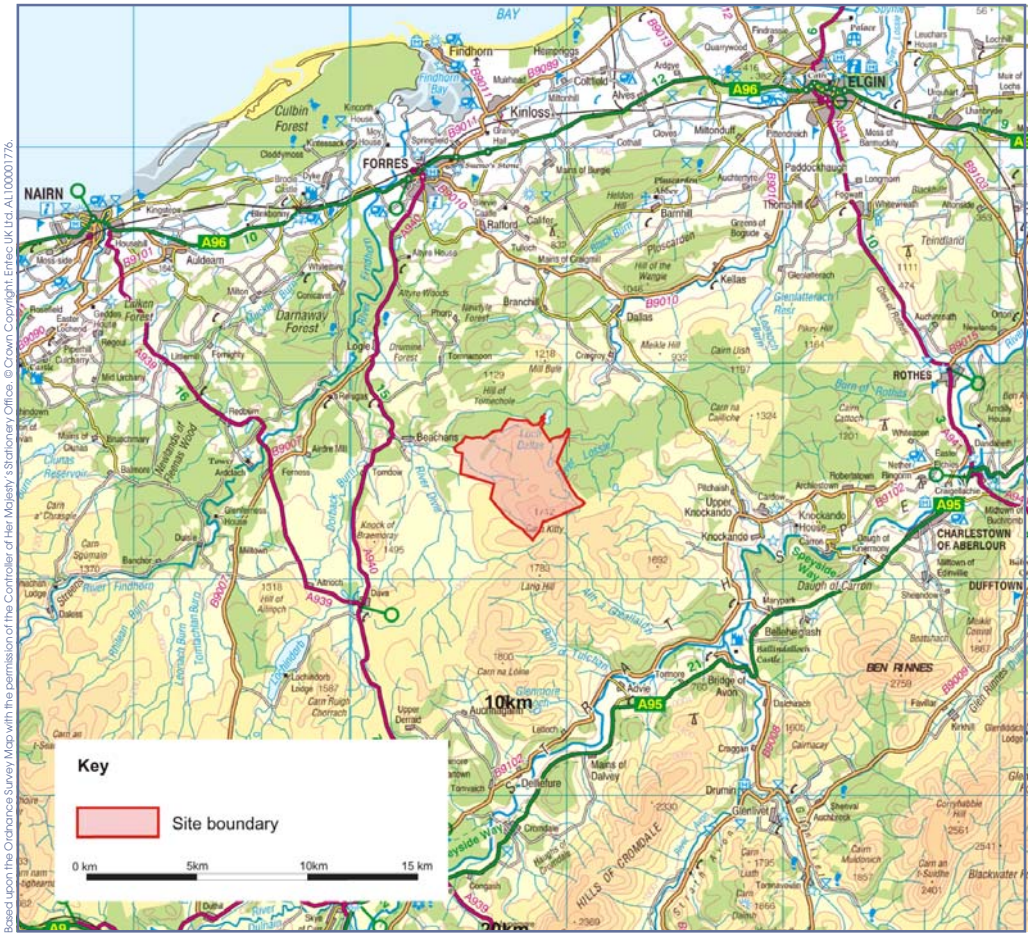
Non Technical Summary

August 2004

Entec

Background

This Non Technical Summary (NTS) forms part of the Environmental Statement (ES) to accompany an application by Catamount Energy Limited to construct and operate a 29 turbine windfarm (Berry Burn Windfarm) on the Altyre Estate in the Moray Council area.



Site Location

Interest in renewable energy production (such as that produced by a windfarm) has arisen in response to growing concern about the rise in atmospheric levels of carbon dioxide (CO_2) and other greenhouse gases, and the changes in global climate that this could be causing. Burning fossil fuels (coal, oil and gas) is a major contributor to greenhouse gas emissions, and reducing their use and increasing the proportion of power generated from renewable energy sources is seen as a vital part of reducing these emissions.

In order to meet international obligations the UK government and Scottish Executive are committed to reducing greenhouse gas emissions in an attempt to reduce the effects of climate change that the Executive believes are already being experienced in Scotland. To ensure that UK and Scottish targets are met the Renewables Obligation (Scotland) has been placed on all electricity suppliers. This obliges them to increase the proportion of power that they supply from renewable sources, and includes a system of targets and financial penalties that will be imposed if these targets are not met. The Scottish Executive expects that much of the new power generation capacity required to meet the Renewable Obligation (Scotland) will come from windfarms, and that in the short term these will be primarily on land rather than offshore. Scotland has one of the windiest climates in Europe, giving the country great potential to use this resource to generate electricity.

The Windfarm

The proposed development is described in detail in the ES. A brief description of the proposal is however given below.

- The proposed windfarm site at Berry Burn is located on the slopes of Carn Kitty and Carn Ghiubhais, hills that form part of the Altyre Estate. The site is located approximately 14km north of Grantown on Spey and 12km south of Forres, in the Moray Council area.
- 29 wind turbines, with a hub height of 60m are proposed. The maximum height to blade tip of any turbine used on site will be 104m.
- Associated ancillary development comprising unit transformers, meteorological mast, access routes, substation, borrow pits and temporary site compounds also form part of the application for consent.
- Access to the site will be primarily via unclassified public road and new tracks and lengths of upgraded existing track leading south from the A940 road. A secondary access point is also proposed for concrete deliveries to site at Glenernie.
- The windfarm will connect into the electricity transmission system via underground cables linking it to existing overhead lines which run 3km to the north of the site. The development will not require any additional overhead lines connecting it to the electricity distribution system.
- The electrical output of the proposed windfarm is anticipated to be 78.3MW, sufficient on average to supply the equivalent of the domestic electricity needs of approximately 43,500 homes (approximately the number of homes within the Moray Council area).
- The proposed windfarm is designed with an operational life of 25 years and permission is sought for this period of operation only. After this period the site can be fully restored or future generations can decide how they want to secure their energy needs.
- Construction of the windfarm is anticipated to take about 12 months, with opportunities for local workforces and companies to be involved.

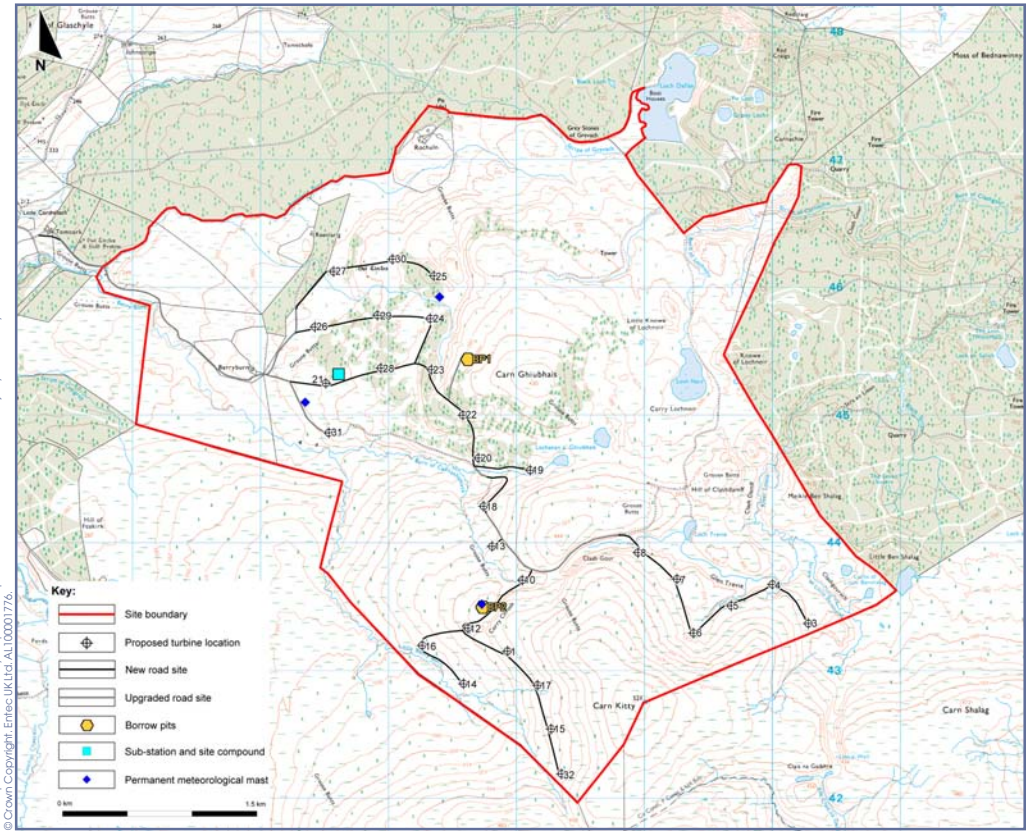
Environmental Impact Assessment

Environmental Impact Assessment (EIA) is a process by which information about the environmental effects of a project is collected, evaluated, and taken into account in its design, the decision as to whether it should be given consent, and if it is given consent, how it is subsequently to be built, operated and dismantled. The developer presents the information on the project and its environmental effects in an Environmental Statement (ES).

Consultation

A key aspect of the Environmental Impact Assessment is consultation, both to agree the scope of the document to be submitted and to understand public perception of the windfarm in order to help in the design process. Organisations consulted included The Scottish Executive, Moray Council, Scottish Natural Heritage, Royal Society for the Protection of Birds, Scottish Environment Protection Agency, Historic Scotland and many others.

Public consultation was also undertaken and included two public exhibitions, in Forres and Rothes in August 2004 at which members of the public were invited to provide their views and comment on the proposals.



Proposed Site Layout

Environmental Effects

Introduction

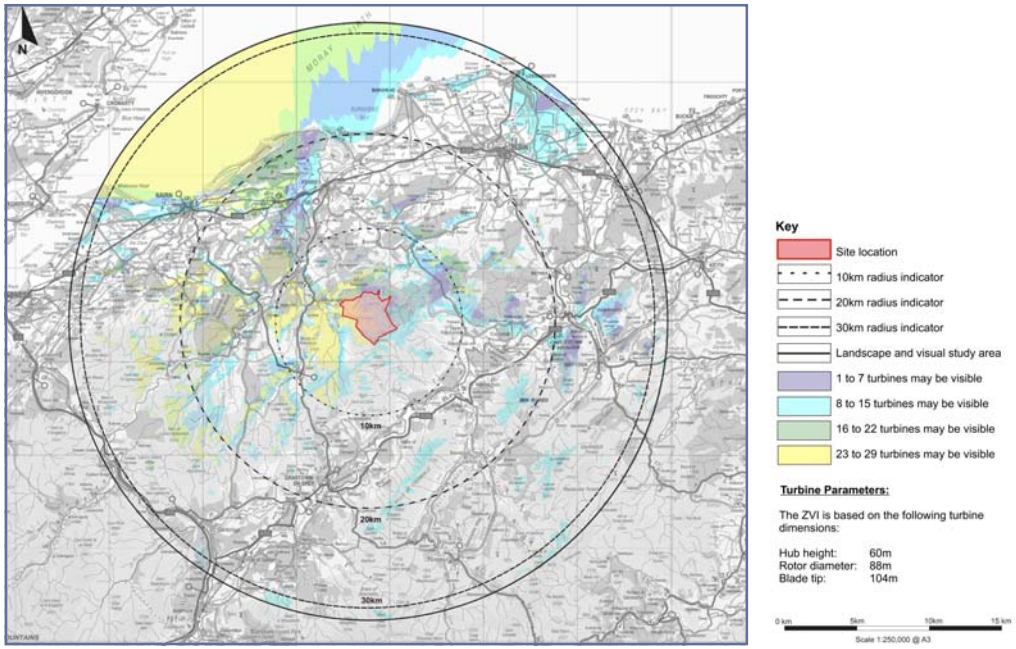
The following sections provide a brief summary of the main findings of the EIA as set out in the technical sections within the full Environmental Statement.

Landscape and Visual

The methodology for the landscape and visual assessment followed best practice guidance. This distinguishes between landscape and visual effects. Landscape effects can be defined as 'changes to landscape elements, characteristics, character, and qualities of the landscape as a result of development' while visual effects are concerned wholly with the effect of the development on views, and general visual amenity. There was also an assessment made of the potential effects on landscape and visual amenity where there is the potential to be more than one windfarm in the area, otherwise known as the potential cumulative effects.

Landscape Assessment

The windfarm lies in an area of landscape character called 'Open Uplands'. This type of landscape is recognised as having some capacity for windfarm development because it has a broad scale and non-distinctive, undulating plateau, landform. These local landscape factors together with a reduced sensitivity and higher capacity for windfarm development, and the design of the windfarm, will allow the proposed development to be broadly accommodated within the landscape character of the area.



ZVI to Blade Tip

The landscape assessment of the final layout concludes that the overall effects on the Open Uplands and adjacent areas of landscape character and quality in terms of this proposal and other windfarms included in the cumulative assessment will not be significant.

Visual Assessment

Potential visibility, as indicated by the computer generated 'Zone of Visual Influence (ZVI) and site surveys, would be extremely limited and there would be no significant visual effects on landscapes which are designated for their protection and value, towns and villages, and roads, rail and paths in the area used by the population and tourists.

Only 7 residential properties would experience significant visual effects, but due to the design and proximity of the windfarm these are not expected to be adverse. There is only one point on a minor road where significant cumulative visual impact with other windfarms proposed in the area are expected. Otherwise the windfarm will not contribute to the overall visibility of windfarms in the area.

Noise

Construction Noise

During the construction period a range of different activities would take place within the site, but those likely to create most noise will be during the track laying stage and excavating and laying the turbine foundations.

While it may be possible to hear construction noise at the houses closest to the site, They are quite far away from construction activities, and therefore it is unlikely that construction noise will present a significant impact. Construction will only take place at certain times of day unless there is a specially agreed circumstance. This also applies to deliveries, which will only take place on an agreed route.

When the windfarm is taken away from the site the noise effects are expected to be very similar.

Operation Noise

Guidance recommends that noise from the windfarm when it is operating is limited to 35 dB(A) (similar to a quiet bedroom) at houses in wind speeds up to 10ms-1 at 10m height. This condition alone would offer sufficient protection to the amenity of the property.

A noise model which assumed a particularly noisy wind turbine and other factors to present a worst case scenario was run. It showed that the recommended noise level would be broken by a very small amount at one property, but that in practice it is likely that the recommended noise limits will not be breached at this location. At another location noise from the windfarm will be higher but the property is uninhabited and owned by the estate. In this circumstance a higher noise level is permissable under the guidance.

If noise proves to be problematic then the windfarm can be run in such a way that will reduce the effect.

Ecology and Nature Conservation

The ecological assessment was carried out by gathering lots of relevant existing data about the site and then surveying the site using standard methodologies, in an effort to find the location of interesting and protected habitats and mammals.

A number of individuallly protected habitats are represented at Berry Burn, including blanket bog, bog woodland, Caledonian Forest and upland heath. The bog habitats have been drained across much of the site, although the vegetation is still in reasonable condition. The best quality bog vegetation is in the eastern part of the site and has been avoided in the windfarm design. The blanket bog and bog woodland is considered to be of regional importance but the extent of Caledonian forest is extremely limited and therefore considered to be of local importance. The upland heath habitats are widespread and abundant in this part of Scotland and are therefore considered to be of local importance. The other habitats present on the site are of local or less than local importance.


Photomontages produced for illustrative purposes only

The site supports a number of protected mammal species including otter, red squirrel and water vole, although populations of all of these are not considered to be of any greater than local importance.

Effects on the interesting habitats have been limited by design, in that the best quality bog vegetation has been avoided by access tracks and turbines. Further more the area taken up by the development is proportionally very small compared to the rest of the site. On the deep blanket peat, access tracks will be of a floating design and therefore impacts on water (important for the maintenance of bog habitats) will be minimal. The overall significance of any negative effects is therefore predicted to be minor. Signs of otter and water vole were found within the survey area, but the turbine clusters and routes of the access tracks will be re-surveyed during the micro-siting exercise immediately prior to construction to ensure that these species are not effected.

Birds

The layout of the wind farm was subject to major changes to avoid putting turbines near to where protected bird species use the site. The risk of birds colliding with wind turbines at Berry Burn is considered to be of no more than minor significance at most.

A Habitat Management Plan (HMP) will be put in place with the main aim of increasing the overall value of Berry Burn for birds. The management proposed will create additional areas of nesting and foraging habitat, particularly for protected birds, waders and black grouse. The impact of the proposed windfarm with regards to disturbance and displacement of birds is considered to be not significant and the implementation of the HMP will result in an overall improvement of Berry Burn for birds. It also proposed to use the site to study the effects of wind turbines on birds, with the proposed habitat improvements.

Traffic and Transport

The main transportation impacts will come through the movements of commercial Heavy Goods Vehicles (HGVs) to and from the site during the construction phase of the development.

The maximum traffic impact associated with the construction of the wind farm is predicted to occur in the sixth month of the construction programme. During this month, an average of 18 two-way trips per day (9 in and 9 out) are predicted. On 29 days during the construction period an additional 200 movements may arise due to concrete deliveries.

Comparing the predicted traffic levels against existing traffic numbers on roads used to acces the site shows that traffic levels are within acceptable levels except when concrete is being delivered to the site. This only occurs on a very limited period during construction.

Disturbance caused by construction traffic will be limited through the implementation of a Traffic Management Plan, and the delay to other road users is likely to be minimal.

Archaeology and the Historic Built Environment (Cultural Heritage)

The site design process has attempted to avoid known features of cultural heritage interest where possible. The only direct effect currently identified is the loss of a small proportion of features recorded in the area of Rochuln Rocks, as a result of the construction of the access track between Turbines 27 and 30. It will be possible to restrict direct effects to clearance cairns, the most numerous and least important type of feature in this area, through site survey, carefully siting the turbines and recording the remains. This would represent sufficient compensation of their loss.

Other features are likely to be avoidable but any effects on them will be compensated by their preservation record.

There is considered to be some potential for further archaeological remains that have not previously been identified to be present within the site. However, given the small area of the development in comparison to the wider site, archaeological monitoring of intrusive groundworks (commonly referred to as an archaeological 'watching brief') would enable the identification of archaeological remains and their preservation by record.

A scheme for the necessary archaeological work will need to be agreed in advance with Aberdeenshire Archaeology Service.

The level and extent of effects on other protected historic and built features, by upsetting their relationship with their surroundings, (harming their setting) as a result of this development, is expected to be particularly low, owing to the distance of these features from the site and the low level of visibility of the windfarm.

The Water Environment

The impact assessment has taken account of the surface water features. It has highlighted a number of potential impacts on the water environment, primarily during windfarm construction, but potentially also during site operation and decommissioning. These impacts are associated with a range of activities, including access track construction and wind turbine erection. The most serious potential impacts are associated with sediment-laden runoff from exposed ground entering watercourses. However, the employment of mitigation measures, in accordance with current best practice, will ensure that any negative impact that does occur is of minor significance and quickly controlled.

Effects on People and Business

The windfarm provides the opportunity for the Altyre Estate to receive a steady income through an alternative income source, which would enable ongoing investment into the estate with subsequent indirect benefits to the local economy. The development also constitutes a large investment in the area by the developer and as such provides the opportunities for indirect positive economic investments. The economic effects of the proposed windfarm will be long-term and on the whole will be positive.

Effects on Infrastructure, Radar, Telecommunications and Safety

An unacceptable effect in terms of infrastructure, telecommunications, television, aviation and safety would be one that significantly disrupts a service. There are no effects in this respect from the windfarm.

By mitigating all other relevant effects the windfarm may have, it is not anticipated to have any significant effects on existing infrastructure, telecommunications, television, civil and military aviation and safety.

Conclusions

The development of a 29 turbine windfarm at Berry Burn will contribute to both the UK government's target of reducing CO_2 emissions by 20% by 2010 and the Scottish Executive's target of generating 18% of energy from renewable sources by the same date.

The Environmental Impact Assessment of the proposed Berry Burn Windfarm has addressed a wide range of potential impacts on different aspects of the environment. The emerging findings of the assessment process have had major part in the design of the windfarm and picking the final site layout. A range of other measures come with the windfarm which should prevent most of the potential impacts identified from resulting in significant negative environmental effects.

It is predicted that the only significant negative effects which would result from the construction and operation of the proposed windfarm would relate to visual effects, ornithology, ecology and nature conservation, cultural heritage and hydrology and hydrogeology, although for all of these, with the exception of the visual effects, these will be of no more than minor significance.

No significant negative effects have been identified on landscape, noise, traffic and transportation, geology, socio-economics, land use and public attitude; or existing infrastructure, telecommunications, television, aviation safety, shadow flicker and windfarm safety.

The windfarm proposal brings with it a proposed habitat management plan which will bring significant major benefits to bird habitat on site. In addition to its broader contribution to reducing greenhouse gas emissions, the development will have several minor positive effects on the local economy through financial contributions to a local landowner and through potential employment opportunities.

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