



Hexham Racecourse Wind Turbines

GUIDE TO PROJECT

Hexham Racecourse Wind Turbines

PROJECT TEAM

<i>Name</i>	<i>Position</i>	<i>Telephone</i>	<i>Email</i>
HEXHAM RACECOURSE			
Charles Enderby	Chief Executive	01434 606881	admin@hexham-racecourse.co.uk
NORTH ENERGY			
Barbara Hooper	Project Manager	01661 843545	barbara.hooper@northenergy.co.uk



Contents

	<i>Page</i>
Introduction - The Hexham Racecourse Wind Project.....	4
1 Selecting the Site	5
2 Assessing the Potential Impact	7
2.1 Ecology	
2.2 Landscape and Visual Impact	
2.3 Aviation	
2.4 Archaeology and Cultural Heritage	
2.5 Noise	
3 Keeping the Local Community Informed	10
4 The Planning Application and Beyond	11
4.1 Submitting the Planning Application	
4.2 Beginning the Construction Programme	
4.3 Connecting to the National Grid	
5 Possible timetable for Hexham Racecourse Wind Turbine	13
6 Suggested further reading and sources of information	14

Introduction:

The Hexham Racecourse Wind Project

Hexham Racecourse, owned and operated by the Hexham Steeplechase Company, wishes to give leadership to the racing industry by becoming the first carbon neutral racecourse in the country. The additional income is also necessary to safeguard the future of the Racecourse in testing times for the industry.

As a result, the Racecourse is currently considering generating power from the wind at their site near High Yarridge, south west of Hexham. Feasibility work has identified that the site may be able to accommodate up to two medium-sized turbines. These would generate enough electricity in a year to not only power the Racecourse, but also to cover the average annual use of up to 320 homes.

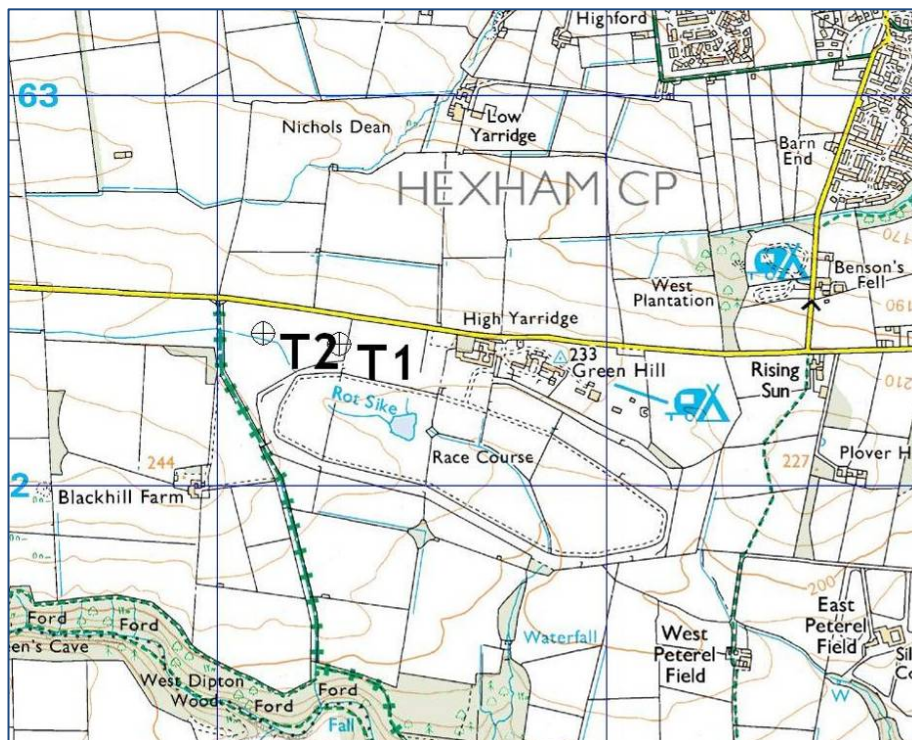
A proposal to erect a wind turbine involves a number of different stages, and the whole process, from site selection to installation, can take many months (depending upon the size and number of turbines). Before a planning application can be submitted, studies have to be carried out, and information collected, in order to present the local planners with a complete picture of the likely impacts of the turbines.

North Energy, a local renewable planning consultancy, is guiding the Hexham Racecourse Wind Project through this process. A key element is to inform local residents about the proposals. This guide is intended to help by providing information on the project, and the various studies and consultations underway.

1 Selecting the Site

Feasibility studies have been carried out to assess the most appropriate location for turbines within the Racecourse boundary. A number of constraints need to be taken into account when assessing the suitability of any site for wind turbines, and these constraints will determine the potential size, number and position of turbines. These constraints include wind speed and turbulence, spatial issues (for example, the distance from roads, power lines or water courses), noise levels at the nearest dwellings, effect upon the landscape, aviation, ecology and wildlife, civil and electrical engineering considerations shadow flicker, access and telecommunications considerations.

The various constraints at Hexham Racecourse have shown that the most suitable area for turbines is the area to the north west of the racecourse (see the location map below). The site can support two medium sized turbines, turbines, marked as T1 and T2 on the map.



© Crown copyright. All rights reserved. 2011. Licence number 0100031673

The candidate turbines being considered for Hexham Racecourse are rated as 225kW machines, with a hub height of 31.5m and a height to tip of 46m. The machines are based upon a model with a long history of safety and performance.

Two very similar machines can be seen within the north east, at the Greenhouse at Annfield Plain, and at the EcoCentre at Jarrow. These machines are equivalent to the model proposed for Hexham Racecourse, although one metre lower to blade tip.



*A Vestas V27 turbine at The Greenhouse, Annfield Plain
(Image courtesy of The Greenhouse, Groundwork North East)*

2 Assessing the potential impact

When considering the development of a wind turbine project, it is essential to establish early and regular liaison with the planning authority so that they can advise on the type of assessments they would expect to receive as part of the planning application. The relevant local planning authority for the Hexham Racecourse is Northumberland County Council, and a number of meetings and consultations have been held with them. As a result, the planning team have confirmed that the impact of the two proposed turbines would not be so significant that an Environmental Impact Assessment is required. However, they have requested a range of studies and consultations to accompany the planning application, and work on these has been ongoing for the past few months.

The issues to be considered include ecology, landscape, aviation, archaeology and cultural heritage and noise.

2.1 Ecology

There is potential that wind turbines can affect species and habitats, and the planning application must therefore be accompanied by a rigorous set of surveys and studies to demonstrate any likely effects, and the proposals for mitigation where appropriate.

A number of studies are currently underway, covering habitats, bats, badgers and birds. The key statutory and voluntary organisations have been consulted, and their advice taken into account when planning the work to be done. Early results have already led to the design and layout of the turbines being altered.

2.2 Landscape and Visual Impact:

The visibility of a wind turbine is often one of the most contentious issues, so it is vitally important to assess the visual impact thoroughly. The proposed wind turbines are sited within the Green Belt and within relatively close proximity to

the North Pennines Area of Outstanding Natural Beauty. The site may also be visible from Hadrian's Wall and Hexham Abbey.

A detailed study is therefore underway to carry out a Landscape and Visual Impact Assessment (LVIA), which will consider the potential impact of the turbines upon key sites and areas, including any cumulative impacts arising from other approved wind power developments within the study area. A Zone of Theoretical Visibility (ZTV) is also being prepared, which will cover a radius of 15km and show the areas from which the turbines might be visible (assuming 'bare earth', ie: no trees or obstructions).

As part of the landscape assessment, a number of 'photomontages' are also being prepared (pictures of the landscape with the turbine added in via specialised computer programmes). These will show the predicted view of the turbines from a series of viewpoints, from locations agreed in consultation with Northumberland County Council. For example, the picture below is a section of one of the photomontages, showing the indicative view from Loadman to the south of the racecourse.



Indicative view only: not reproduced to planning application standards

All images and photomontages will be available for view as part of the planning application, and a public exhibition will also be held at which all the plans and images will be shown.

2.3 Aviation

Wind turbines can potentially have an impact upon aviation through radar interference, obstruction or impact to low flying. It is therefore essential to consult with the Ministry of Defence, National Air Traffic Safeguarding, and Newcastle International Airport. Potential impact upon local private aerodromes has also been considered, and the Northumbria Gliding Club has been consulted.

2.4 Archaeology and Cultural Heritage

A desk-based assessment has been carried out to evaluate the likely impact upon archaeology within the development area. In addition, an assessment will be made of the likely impact of the turbines upon key sites of cultural heritage within the study area, including Scheduled Ancient Monuments, Listed Buildings, Conservation Areas and Historic Battlefields. This will be particularly important for sites such as Hadrian's Wall or Hexham Abbey.

2.5 Noise

Noise from turbines can often be raised as a concern by local residents. However, the noise from wind developments is generally very low. When standing underneath a wind turbine, it is usually possible to hear the 'swish' from the blades as they rotate, yet it would also be possible to hold a normal conversation without having to raise your voice.

Advice has been sought from the Environmental Health Officer at Northumberland County Council on the level of assessment required on the site. Given the location and scale of the development, the officer has recommended that only a Simplified Assessment will be necessary.

Other studies will also be submitted as part of the planning application, including access, electromagnetic interference, shadow flicker and impact on utilities.

3 Keeping the local community informed

A key part of the development process will be consultation with local residents. Hexham Racecourse and North Energy will aim to provide information, help understanding, and address any issues and concerns that might be raised.

This document forms one part of this process. A programme for consultation is currently being drawn up for consideration by Northumberland County Council, to ensure that local residents are kept informed of the proposals and are given the opportunity to make comments and ask questions.



The programme will include a public exhibition, where all photomontage work will be displayed, as well as the results of all the studies referred to above. This will take place prior to the planning application being submitted.

In many areas, local communities have found that a proposal for wind turbines can provide excellent educational opportunities, both in local schools and colleges and beyond. Hexham Racecourse is particularly keen to explore opportunities to raise awareness of the benefits of renewable energy not only to the local community, but also to its many visitors and the racing fraternity from around the country.

4 The planning application and beyond

4.1 Submitting the planning application

Once all the necessary studies have been carried out, a full planning application will be submitted to Northumberland County Council. They will check that the proposal is in line with national and local planning policies, and consider the supplementary studies, along with responses from the public consultation which will have been carried out. They will then make a recommendation to the planning committee, which is made up of locally elected councillors, who will make the final decision. If the application is rejected, the developer is entitled to go through an appeal process.

4.2 Beginning construction programme

If planning permission is granted, the construction process takes on average six months. During this time, construction traffic will move around the site as required, entering via a pre-agreed access route. A new access track will be required, around five metres wide, and will follow field boundaries where possible. It is not considered that any modifications will be needed to approach roads for delivery of the turbine components, as these can all be accommodated on standard 40ft flat-bed trucks.



Once the wind turbines are in operation, the access road will need to stay in place to allow for maintenance. At the end of the turbine life (usually 25 years), the roads can be removed along with the turbines, or left in place if the landowner prefers.

Construction activities are carefully planned in order to minimise disruption to those farming or using the land. The turbines are installed on a concrete base which is set well below the ground, to allow the land to be farmed close to the

tower unit, and normal cultivation to be carried out.

4.3 Connecting to the national grid

Turbines are usually connected to the grid by underground cables, below normal cultivation depth. A small sub-station will need to be constructed adjacent to the turbines. Once in operation, the need for access is fairly minimal, with an agreed maintenance plan being carried out, and monitoring of the turbine being carried out remotely via telephone links. Modern turbine units are extremely efficient and well proven. However, if the sophisticated control systems develop any faults, the turbine would stop automatically and the problem would be reported electronically.



5 Possible timetable for the Hexham Racecourse wind turbine project

Wind farm timetables are often subject to delays caused by issues thrown up by the studies and investigations, as well as the planning and appeals system, so the following guide is only approximate.

Activity	Approximate Start date	Approximate end date
Inform Northumberland County Council of the proposals, and agree the scope of the studies to be carried out.	January 2009	Completed
Begin ecological studies -	Commenced June 2009	Sept 2011
Carry out range of studies, to include:- landscape; archaeology / heritage; aviation; noise.	March 2011	Sept 2011
Commence public consultation, with meetings, press releases, public exhibition	June 2011	Sept 2011
Compile results of above studies and submit planning application	Sept 2011	Sept 2011
Planning determination period	Six months	Six months
Construction process	Twelve months	Twelve months
Grid connection process	TBA	TBA

6 Suggested further reading and sources of information

- Hexham Racecourse: www.hexham-racecourse.co.uk
- Renewable UK: www.bwea.com
- The Government's role in combating climate change and promoting low carbon technologies: <http://www.decc.gov.uk/>
- The Government's planning advice on renewable energy: www.communities.gov.uk
- The Sustainable Development Commission: www.sd-commission.org.uk
(Produced a report on Windpower in the UK, available for download from the web, along with a helpful booklet. <http://www.sd-commission.org.uk/data/files/publications/Wind%20Power%20-%20your%20questions%20answered%20FINAL.pdf>)



Indicative view only from Blackhill Farm: not reproduced to planning application standards