

PREFACE

This Environmental Statement accompanies a planning application to North Cornwall District Council for the erection of a wind park just north of the hamlet of Davidstow, in North Cornwall.

The Environmental Statement comprises the following documents:

- Non-Technical Summary
- Environmental Statement
- Planning Statement

As required under the EIA regulations the Non-Technical Summary provides a synopsis of the assessments contained within the Environmental Statement (ES) and presents the information in a non technical manner avoiding, wherever possible, the use of technical terminology.

A Planning Statement has also been prepared in support for the application. This has been submitted to North Cornwall District Council.

The Environmental Statement and accompanying documents can be viewed at the following locations during the statutory consultation period:

Location 1

North Cornwall District Council
Council Offices
3/5 Barn Lane
Bodmin
Cornwall
PL31 1LZ

Location 2

Camelford Library
Town Hall
Market Place
Camelford
Cornwall
PL32 9PD

Further copies of the Environmental Statement can be obtained by contacting Ecotricity at the address below at a cost of £150 per hard copy and £35 on CD.

Simon Coles
Planning Team
ecotricity
Axiom House
Station Road
Stroud
Gloucestershire
GL5 3AP

Tel: 01453 769374

Email info@ecotricity.co.uk

The Non-Technical Summary is available to download free of charge from www.ecotricity.co.uk where photomontages of the proposed scheme and more information about the project can be viewed via our online exhibition.

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NON-TECHNICAL SUMMARY

1 OVERVIEW

- 1.1 This document is a non-technical summary (NTS) of a much more detailed Environmental Statement which forms part of **ecotricity's** full planning application to North Cornwall District Council. The NTS is simply a summary of the main environmental effects likely to occur during construction, operation and removing the wind park.
- 1.2 **ecotricity** was established in 1995 as the UK's first green electricity company and a pioneering wind energy developer. Our wind turbines, operating across the UK, produce enough electricity from wind to power more than 5,000 homes. The Enercon turbines we install were designed by Foster and Partners, who also designed Stansted Airport and the Great Court at the British Museum.
- 1.3 The Hendraburnick Wind Park comprises of 4 turbines and the associated infrastructure to allow connection to the grid system and operational maintenance.
- 1.4 This development is expected to generate approximately 30 GWh of renewable electricity per year, and as such the following statements can be made:
- This is equivalent to 5.45% of North Cornwall's total electricity consumption in 2004, or 11.9% of North Cornwall's domestic electricity consumption¹.
 - The output is equivalent to the annual electricity demand of approximately 9,090 average UK households², or 4,860 homes in North Cornwall (based on 2004 consumption); this amount would be adequate to supply over and above the number of households in Bodmin³, if household energy consumption in North Cornwall matched the National Average. As North Cornwall households currently consume considerably more energy than the average UK home the number of homes these turbines could supply with energy would reduce, but they would still supply more than the number of households within Launceston⁴.
- 1.5 As the proposed wind turbines are proposed to produce approximately 30GWh per annum, the following statements can be made due to the displacement of electricity generated from fossil fuels (based on POST⁵):
- 30,00 tonnes of carbon dioxide equivalent of greenhouse gases each year;
 - 450 tonnes of sulphur dioxide each year;

¹ DTI (2005). *Regional and local electricity consumption statistics, 2004 (experimental)*. <http://www.dti.gov.uk/energy/statistics/regional/>

² DTI (2006). *Quarterly Energy Prices. Average UK annual domestic standard electricity bill assumes an annual consumption of 3,300kWh*. http://www.dti.gov.uk/energy/inform/energy_prices/

³ Office for National Statistics / Cornwall County Council Research and Information Unit (2001). *North Cornwall Parish Population Statistics – 2001*. <http://www.cornwall.gov.uk/index.cfm?articleid=10525>. Using estimate 2.09 persons per household (North Cornwall total population 80509/total household spaces 2001 estimate 38470 (<http://www.cornwall.gov.uk/index.cfm?articleid=12703>)).

⁴ Energywatch (2005): *average household uses 3,300kWh per annum*. http://www.energywatch.org.uk/uploads/Smart_meters.pdf

Office for the Regulation of Electricity and Gas (December 1999). *Energy Efficiency, Fuel Poverty and the Supply Price Control: A consultation paper*. Uses 3,300kWh as the typical average level of household consumption of electricity.

⁵ POST (1994). *Select Committee Briefing: Environmental Aspects of Wind Generation*. Quotes figures of 14-16.4g/kWh for SO₂ and 2.92-5.3g/kWh for NO_x.

- 123 tonnes of Nitrogen Oxides each year.

2 INTRODUCTION

- 2.1 This NTS forms part of an environmental Statement for the proposal undertaken by **ecotricity** to construct a wind park at hamlet of Davidstow, in the District of North Cornwall. The proposed wind park consists of 4 turbines and associated infrastructure including, sub-station, temporary laydown area and access tracks.
- 2.2 The wind park will generate electricity for 25 years, after which it will be removed. Alternatively a new planning application will be submitted to the Local Planning Authority (LPA) to replace the turbines. The installed capacity of the project is approximately 8 megawatts (MW).
- 2.3 Global Climate Change is widely recognised as being one of the greatest environmental challenges facing the world today. The Government has set a domestic goal of reducing Carbon Dioxide emissions. It launched the UK Climate Change Programme in November 2000, as part of its commitment to meeting its obligations under Kyoto Protocol. The stance highlighted the importance of taking immediate action to minimise the impact of climate change was clarified even further in February 2007 with the publication of the IPCC Report called '*The Physical Science Basis of Climate Change*'.⁶

3 THE ENVIRONMENTAL STATEMENT

- 3.1 The Environmental Statement has been prepared in accordance with Environmental Impact Assessment (England) Regulations 1999. It describes the wind park development itself, the nature of the site and its surroundings, the potential effects of the development on the local environment and the measurements proposed to mitigate against any adverse effects identified.
- 3.2 The proposed development is considered to be a 'Schedule 2 development', under the Regulations. The Environmental Statement has been prepared in accordance with Schedule 4 of the Regulations, which specifies the information that should be included in the Environmental Statement.
- 3.3 Likely environmental effects including direct, indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects have been considered for construction, operation and removal (decommissioning) of the wind park.
- 3.4 The Environmental Statement is bound in an A3 document with the accompanying figures and appendix. A Non-Technical Summary, a Planning Statement and a Design and Access Statement have also been prepared and are bound separately but will be submitted in tandem with the Environmental Statement to North Cornwall District Council.

4 SITE SELECTION

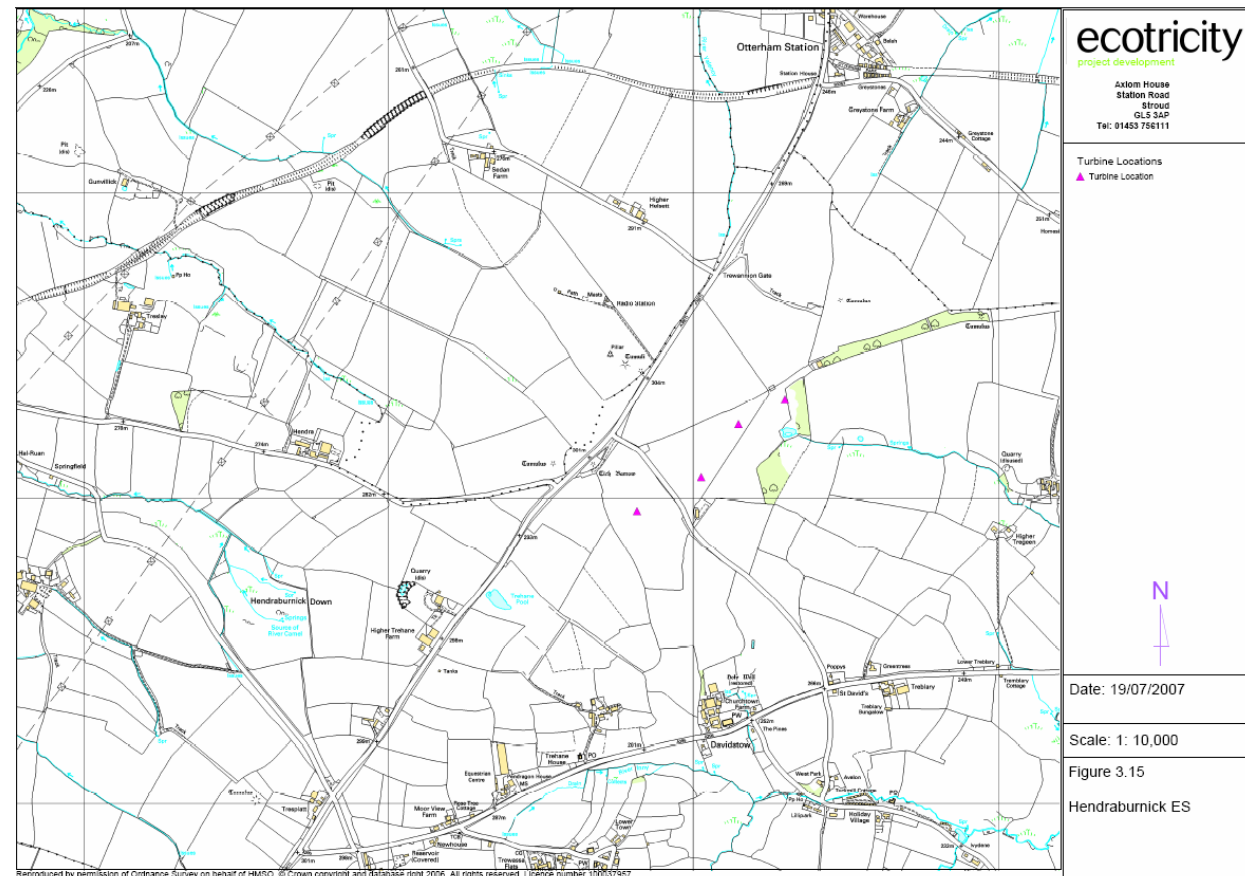
- 4.5 Finding a suitable place to build wind turbines is a complex process dependent on a whole range of factors. Using advanced digital mapping computer software, extensive consultation with local, regional and national bodies and organisations, ecotricity assessed a number of possible sites within North Cornwall and found that this was a suitable site because:
- There is sufficient wind resource.
 - Homes are far enough away from the turbines not to be significantly affected by, for example, noise or shadow effects.

⁶ <http://www.ipcc.ch/>

Non-Technical Summary

- There will be no interference that cannot be resolved with televisions, radar, or mobile phone masts.
- The power can be taken from the turbines to the local electricity grid.
- Construction and maintenance vehicles can access the site.
- The current land use can continue around the turbines.
- The turbines will not affect wildlife and the site is not protected for ecological or landscape reasons.
- No features of historic interest or importance have been found on or adjoining the site
- The land can be leased from the owner.

Site Layout



Results from Internal Site Selection

- 4.6 The factors which are outlined above are then mapped using Geographical Information Systems (GIS). Once these constraints are mapped, areas which are suitable for appropriate development remain.
- 4.7 Despite generally good wind speed, a number of constraints to wind farm development exist within the North Cornwall District. These include conservation areas, proximity to residential housing and distance to the electrical grid network. Maps showing these constraints and the resulting suitable areas can be found in **Chapter 3: Site Selection & Design**.

- 4.8 There are already a number of wind farms within the vicinity of Hendraburnick which have been considered within the assessment of the siting of these turbines within the landscape. This assessment can be viewed in more detail within **Chapter 6: Landscape & Visual Impact Assessment**.

Iterative Site Design

- 4.9 The final number of turbines and their locations have been influenced by various factors including, telecommunications links, ecological habitats, landscape and built heritage considerations and feed back from the Council during pre-application discussions.
- 4.10 The process of environmental impact assessment is iterative in its nature, which has resulted in incremental changes to the proposed design to reach this final layout. Revisions of the layout of turbines at Hendraburnick have responded to specific environmental impact, identified at both scoping and during the EIA process. The final layout aims to mitigate against all of the identified environmental impacts where possible.

5 THE WIND PARK PROPOSAL

- 5.1 The proposed wind park comprises of the following:
- 4 three bladed, horizontal axis wind turbines with a total maximum height to blade tip of 120m
 - Sub Station
 - Access tracks between the turbines & construction pads
 - 33kV underground cabling to connect the turbines and sub-station
 - Temporary construction compound
 - Amended access's at existing farm access points

6 NEEDS AND BENEFITS

- 6.1 The Government's policy regarding renewable energy is to increase the supply of electricity from renewable sources of power such as wind, sun, tides and waves. The objective is to reduce the UK's reliance on coal and gas, the use of which release pollutants into the atmosphere, such as carbon dioxide which is known to be causing the world's climate to warm up.
- 6.2 On the 16th February 2005 the Kyoto Protocol, a legally binding agreement committing the UK to reducing the release of pollutants, came into force. In order to help achieve this Protocol's objectives, UK Government energy policy requires 10% of all electricity produced to come from renewable sources by 2010, with the aim of rising to 40% by 2050. The need for new sources of renewable energy is urgent as currently only 4.2% (2005) of UK electricity is produced from renewables such as wind power. Government Energy Policy is enshrined in the White Paper 'Our Energy Future – creating a low carbon economy', in which the Government set out on a path to reduce CO₂ emissions by 60% by 2050. As a part of this policy, the West of England region is required to produce 11% – 15% (595MW) of its electricity from renewable energy sources by 2010. In achieving this target, the Cornwall Sustainable Energy Partnership has proposed a 66MW onshore wind generation installed capacity by 2010 for the county, of which 24.55 MW has yet to be installed.

Community Consultation and Scoping

- 6.3 The consultation process complies with and exceeds the requirements outline by the District Council in their draft Strategy for Community Involvement (SCI). Under the terms of this document this project is considered a 'Major Development'.

- 6.4 During the 12 months prior to the submission of the planning application **ecotricity** undertook an extensive programme of consultation with all key stakeholders including North Cornwall District Council, Natural England (NE) (formerly English Nature), the Environment Agency (EA), Defense Estates (DE), a division of the MoD and the Civil Aviation Authority (CAA). A full list of consultees (statutory and non-statutory) is included in the Environmental Statement within **Chapter 2: EIA**. The views and comments of these bodies influenced the final design of the wind park and the methodologies employed to assess environmental effects in the Environmental Statement.
- 6.5 In line with Best Practice, **ecotricity** submitted a Request for a Scoping Opinion to North Cornwall District Council in February 2007. This is a document inviting the Council to formally comment on the range of issues to be assessed within the Environmental Statement (ES). The comments included within the Council's Scoping Opinion have been duly addressed.
- 6.6 Public consultation on the proposed development was also considered to be a key element of the planning process. To allow the Local Community to understand the details of the proposed Hendraburnick Wind Park a Public Open Day was held on the 3rd July 2007 at the Otterham Village Hall. This event was manned by staff from **ecotricity** who were available to answer any questions residents had. The display materials used at this open day remained on view at the Camelford Library, from 5th-18th July, to allow anybody who could not attend the open day an opportunity to view the proposal
- 6.7 In conjunction with this exhibition the full application will be on display and available for comment at the addresses listed in the preface of this document. A website has been set up (http://www.ecotricity.co.uk/projects/plan_hendraburnick.html), which will outline the proposal and show the exhibition information. A dedicated email address has also been established (Hendraburnick@ecotricity.co.uk) which will allow the general public to raise any queries with **ecotricity** if they were unable to attend the public exhibition or wish to discuss items further. A breakdown on the proposed public consultation process can be viewed in **Chapter 2: EIA**

Public Opinion

- 6.8 People have differing opinions about wind turbines; they may be seen as graceful structures symbolising a more sustainable future on the one hand, or as a blot on a landscape that should be conserved for future generations. Surveys indicate that many residents living in areas where there are wind turbines, support their local wind farms. Since the first wind development in the UK in early 1992 there have been a number of opinion polls undertaken to sample local opinion towards wind power
- 6.9 The British Wind Energy Association (BWEA) briefing sheet *Public Attitudes to Wind Energy in the UK*⁷ indicates that the results of over 60 public opinion surveys taken over the last 15 years show 'a consistently high level of support for the development of wind farms, on average 70-80%, both in principle, as a good thing, and also in practice, among residents living near wind farms.'
- 6.10 A study by MORI Scotland, commissioned by the Scottish Executive examines the views of local people living within 20km of Scotland's 10 largest windfarms⁸.
- 6.11 Three times the number of residents say that their local wind farm has had a broadly positive impact on the area (20%) than say it has a negative impact (7%). Most (73%) feel that it has neither a positive nor negative impact, or expressed an opinion.

⁷ BWEA (2004). *Public Attitudes to Wind Energy in the UK*. <http://www.bwea.co.uk/pdf/energy/attitudes-2005.pdf>

⁸ Public Attitudes to Wind Farms: A survey of Local Residents in Scotland, MORI for Scottish executive, 2003 Sample:1,800 Residents

- 6.12 The 2003 study also found that those people living closest to the wind farms tend to be more positive about them (44% living within 5km say that the wind farm has had a positive impact, compared with the 16% of those living 10-20km away). They are also most supportive of expansion of the sites (65% of those within a 5km zone support 50% expansion, compared with 53% of those within the 10-20km zone).

7 ENVIRONMENTAL EFFECTS

- 7.1 As a result of the wide ranging series of consultation, the following issues have been identified as being of particular relevance to the proposed development of Hendraburnick windfarm and were subject to scrutiny during the EIA process:
- Landscape and Visual
 - Ecology
 - Ornithology
 - Geology, Hydrology and Hydrogeology
 - Cultural Heritage
 - Noise
 - Traffic
 - Radar
 - Shadow Flicker
 - Other Issues – communications, tourism, safety & security, land use and climate change and air quality.

Chapter 6: Landscape and Visual

- 7.2 The location for the turbines has been carefully selected in order to ensure that they cause minimal visual impact. The countryside within which the proposed wind turbines are located is not identified as being of particular national importance to merit designation as, for example, an Area of Outstanding Natural Beauty or a National Park. However, the North Cornwall Heritage Coast AONB lies approximately 1.5km to the north of the site. A landscape study to assess the project was commissioned by **ecotricity**, and undertaken by the independent landscape consultants RPS.
- 7.3 This study found that no significant landscape effects would arise on any land designated for its landscape value in the study area as a result of implementing the proposed Hendraburnick Wind Park. The special qualities and valued characteristics of The Cornwall Area of Outstanding Natural Beauty and Heritage Coast would be preserved, and no Areas of Great Landscape Value, Historic Parks and Gardens or Areas of Great Historic Value (including Bodmin Moor) would be affected.
- 7.4 The Wind Park would have significant impact on a small number of local observers within 2-3km of the proposed development. Due to the relative openness of the local landscape the effects would be evenly distributed across the inner part of the detailed assessment area where uninterrupted views of the proposals exist. However, visual effects generally would be mitigated to a degree by the undulating landform and mature vegetation / buildings, combined with the 'developed' character of the countryside with its telecommunications and electricity transmission infrastructure, industrial buildings and commercial forestry.
- 7.5 In summary, relatively little land with public access in the study area would be affected visually by the proposal and none of it significantly in EIA terms. The reason for this low incidence of visual effects is that most public recreational land is located more than 3km from the site, and the majority lies outside of where the wind turbines can be seen. The incised valleys, tall coastline / cliffs and upland moors would tend to 'hide' the proposed wind turbines in views from publicly accessible land and foreshore in the study area. Where views of the proposals

- are available from the northern slopes of Bodmin Moor, including the summits of Rough Tor and Brown Willy, visual effects would be insignificant from an EIA point of view due to the distance to the Wind Park.
- 7.6 In accordance with best practice the Landscape Visual Impact Assessment (LVIA) takes into account other wind turbines which are built or in the planning system. This is known as a 'cumulative' assessment.
- 7.7 There are five main wind farms in the surrounding area which were considered for the cumulative assessment. There are relatively few places in the study area where the five wind farms would be visible simultaneously (in theory) together with the proposed Hendraburnick Wind Park. These occur primarily within the detailed assessment area and comprise the open, upland areas of Hendraburnick Down (east of the A39) and Davidstow Moor / Woods, and Bodmin Moor's peaks, in particular Rough Tor and Brown Willy. There is little settlement in these areas, save isolated dwellings, but Davidstow Moor / Woods and Bodmin Moor are 'access land' and important for outdoor recreation. Bodmin Moor is designated as part of the Cornwall AONB.
- 7.8 In summary, the proposed wind park would not cause any significant cumulative landscape or visual effects in the study area. The character of the landscape and some views within 3km of the site would be affected to a minor to moderate degree at most which would not be significant in EIA terms. No significant cumulative effects on landscape would arise on the Cornwall AONB or popular recreation routes including the South West Coast Path or the North Cornwall Trail. In addition none of the main settlements in the surrounding area would experience cumulative impacts, including Camelford, Delabole, Tintagel Boscastle and Crackington Haven.

Chapter 7: Ecology

- 7.9 This assessment concerns the wildlife which may be potentially affected by the proposed construction of the wind park. It was undertaken by independent wildlife specialists – Just Ecology, Neil Bostock and Paul Derbyshire. The potential ecological effects of the development are assessed through the various key phases of its development. These phases are its design, construction, operation and decommissioning. The findings of this assessment can be read in detail in **Chapter 7: Ecology**.
- 7.10 Historical records, and on site filed work (Phase 1 Habitat Survey & Protected Species Surveys) were undertaken to find out what animals and plants maybe affected by the development. Natural England (formally English Nature) and RSPB were consulted for advice regarding the ecological status of the site.
- 7.11 There are no national statutory designations, such as Sites of Special Scientific Interest (SSSIs) within the development boundaries, although there are SSSIs located nearby, but outside of the boundaries. These are the five SSSIs in the Ottery catchment including the Ottery Valley SSSI and the River Camel Special Conservation Area (SAC) which is approximately 1.5km from the nearest turbine.
- 7.12 The only protected species found using the site were bats. The actual number of bats recorded on the site was relatively low, and were in no greater levels than would be found in many other arable areas within the country. None of the intact hedgerows, mature trees and derelict buildings which often help to support the bat populations will be altered through the installation of these 4 turbines. A small section of Cornish Drystone wall (approximately 6 meters in total) will have to be removed at the site entrance to allow delivery of the turbines. An equivalent section of wall will be constructed elsewhere on the site to compensate for any lose of habitat.
- 7.13 The construction phase of the development has been identified as the phase which could result in a negative impact on the ecology of the site. However if the suggested mitigation within this Environmental Statement is implemented then any negative effects will not occur.

- 7.14 Overall, when all ecological elements of the site are assessed and mitigation measures are taken into account, there will be no harmful effects on any of the wildlife throughout all phases of this proposed development.

Chapter 8: Ornithology

- 7.15 Government guidance considers that birds can live in harmony with wind turbines which are sensitively located. The object of this assessment was to establish that the location of the turbines would not affect any important bird feeding or breeding area or migratory routes. The studies were undertaken by Kevin Shepherd in accordance with methodologies agreed and developed with Natural England. A twelve-month baseline ornithological survey was initiated in September 2006. Although the area is used by species of high nature conservation importance, this assessment has shown that the turbines will not have any harmful effect upon birds. This assessment can be seen in more detail within Chapter 8: Ornithology.

Chapter 9: Hydrology, Hydrogeology & Water Quality

- 7.16 The hydrology assessment looks at whether the turbines will affect surface water, ground water, private water supplies and any underlying aquifers. It was prepared following consultation with the Environment Agency and other relevant bodies by RPS Group. No Flood Risk Assessment has been prepared for the site as the site has little to no risk of flooding. The assessment found that there is no major aquifer below the surface of the site and so there is no chance of contaminating any ground water supplies. However, standard safeguarding techniques will be used to prevent the accidental discharge of contaminants during the construction phase of the development.
- 7.17 There will be no effect on water courses or supplies due to this development.
- 7.18 Mitigation measures in line with best practice guidance will be implemented throughout the construction, operation and decommissioning of the wind park. The aim of all of these measures will be to minimise the risk to the water environment and specific measures are outlined in more detail within **Chapter 9: Hydrology, Hydrogeology and Water Quality**.

Chapter 10: Cultural Heritage

- 7.19 Assessments have been undertaken to see if this development could have an environmental impact on any archaeological remains on the site by the independent specialists AOC Archaeology. This study is explained in detail in **Chapter 10: Cultural Heritage**. It has shown that human activity has been present in Cornwall for many centuries in and around the site. However, use of the suggested mitigation measures will ensure that no negative effect to any archaeological remains will occur during the construction of the turbines.
- 7.20 The impact on Listed Buildings, Scheduled Ancient Monuments and other protected landscapes was also assessed. Photographic impressions were created for the views from some protected sites in the direction of the wind turbines to see if they would impact on the inherent value of these features. This assessment has determined that the proposed wind turbines will not have a harmful effect upon any of these protected features.

Chapter 11: Noise

- 7.21 The Enercon turbine proposed to be used for this development is the quietest in production worldwide. Unlike other wind turbines they are direct drive, which means they have no gearbox, thereby producing no mechanical noise. The only noise they make is from the passage of air over the blades, which increases and decreases with wind speed. An assessment of turbine noise was commissioned by **ecotricity** and carried out by the specialist independent acoustic firm, The Hayes McKenzie Partnership.

- 7.22 This is included within the Environmental Statement as **Chapter 10: Noise** and includes measurements of background noise levels and takes into account the predicted noise produced by the four proposed wind turbines. The assessment was undertaken in accordance with the recommendations of ETSU-R-97, *The Assessment and Rating of Noise from Wind Farms*.
- 7.23 Baseline noise levels were measured at 5 locations representative of the nearest 3rd party residential properties to the site. These locations were agreed with the Environmental Health Department of North Cornwall District Council. The predicted noise levels from the turbines have been provided and warranted by Enercon, the turbine manufacturer.
- 7.24 The turbines numbers and location were heavily influenced by the noise study and turbine numbers were reduced in order to meet the relevant noise limits applied throughout the UK, required by national planning policy guidance (*PPS 22 Planning for Renewable Energy*). The Council would also set stringent noise limits on the proposal and in the unlikely event that the development breaches these the turbines can be easily adjusted to operate within the set limits.
- 7.25 It can therefore be concluded that the effect of this proposed development should not lead to any noise complaints from local residents as it complies to all government guidance and standards.

Chapter 12: Traffic & Access

- 7.26 Effects on roads are short-lived and essentially limited to the construction period. This traffic can be accommodated on the local road network without undue difficulty and no highway improvements are required. All deliveries, including foundation materials and turbine components, will be made along the A395, B3262 and A39, and through the proposed access point on to the site. Details are provided in **Chapter 12: Traffic & Access** of the Environmental Statement.
- 7.27 There will be a small number of abnormal load movements (the delivery of the turbine components) to the site during the construction phase. The movement of these abnormal loads will be undertaken in consultation with the Highways Authority and Police to ensure minimal disruption to traffic. In order to get the turbines to their final position it will be necessary to build access tracks and hard standings for the cranes that lift them into position.
- 7.28 An assessment of the effects of traffic arising as a result of the three phases of the proposed development (construction, operation and decommissioning) has been carried out. Predicted construction vehicle numbers were compared to existing vehicle numbers, based on data supplied by North Cornwall County Council Highways Agency.
- 7.29 The duration of construction will be 18 weeks, with the greatest average number of vehicle movements occurring during weeks 8-14.
- 7.30 During operation there will be very low levels of traffic, likely to consist of a bi-annual maintenance crew which will arrive on site in a small van, using the existing access points discussed above.

Chapter 13: Aviation

- 7.31 The MoD raised some initial concerns over whether the wind turbines would have an effect on RAF St Mawgan and the RNAS radar at Hartland point. RAF St Mawgan is due to close in 2008 and be replaced with a fully licensed civil airport. To reassure the MoD, the independent company, Spaven Consulting, have undertaken a detailed study which shows the turbines will not be visible to either of the MoD's radars. The study also showed that the proposed wind turbines will not effect any other civil air traffic control services.

Chapter 14: Miscellaneous

- 7.32 'Shadow Flicker' is caused by moving shadows. This effect only occurs when the sun is at specific heights in the sky and its beam passes over the turbine blades. An assessment has been carried out at 21 residential properties within the vicinity of the site. These properties were chosen to be representative of the nearest properties to the proposed development and in areas with the most open views toward the development.
- 7.33 Many variables are required for shadow flicker to occur. These factors include the height of the sun, the weather conditions, the rotation of the turbines, the height of nearby trees, the presence of hills and valleys and the size and location of windows in residential properties.
- 7.34 This issue has been studied in detail by the Wind Industry and they have invested considerable time developing a model of an area around a proposed development which could be effected by Shadow Flicker. In tandem with this modeling they have also developed simple processes which can stop all of the effects. The Local Planning Authority can ensure that these processes are employed if any shadow flicker occurs from this development.
- 7.35 Although North Cornwall is a popular area for tourism, the proposed wind park is not located on land currently used for the purposes of tourism or recreation and will have no direct impact on such resources in the vicinity of the site during the operation of the wind park. Public perception studies indicate that only a small minority consider wind farms to have a negative effect.
- 7.36 The proposed development will not be open to the general public and is therefore not expected to increase tourism in the area. Although it will not be open to the public, an information board will be installed close to the site entrance.
- 7.37 The proposed development would occupy only a small percentage of the whole farming estate and would not affect the use of the fields for agricultural purposes. The development would contribute to the economic viability of the estate by diversifying the agricultural enterprises on the site. This development contributes to Policy 7 of the Cornwall Structure Plan 2004 which states that the diversification of the rural economy should be a particular aim of renewable energy generation schemes.
- 7.38 During the construction period a minor significant benefit could be felt in the local community as services for the construction process are purchased locally. Once construction is completed this economic benefit will revert to current conditions.
- 7.39 Discussion are still ongoing with some telecommunications companies. The turbines have been carefully sited outside of any telecommunications links and it is expected that no microwave links would be affected by any of the proposed turbines. If this is not the case then there will be mitigation methods available to overcome any issues raised.
- 7.40 Due to the method of radio transmissions and reception, it has been concluded that the proposed wind turbines would have no detrimental effects on national or local radio reception in the vicinity of the proposed development.
- 7.41 Although unlikely, wind turbines can interfere with TV reception, causing 'ghosting' of the image or a reduction in quality. Any problems caused with TV reception as a result of the turbines, can easily be remedied by a range of measures including, re-orientating the aerial to another TV transmitter, fitting of a signal booster or installation of a digital TV box. **ecotricity** will incur the costs for these mitigation measures if necessary.
- 7.42 With regards to health and safety, the wind park would comply with all relevant health and safety regulations. During construction all site based activities will be conducted in accordance with the Construction (Design & Management) Regulations 1994, with all site workers conforming to the requirements of a specific health and safety plan.

7.43 There should not be any issues regarding the safety of pedestrians during construction, as there are no public footpaths crossing the development area.

8 MITIGATION MEASURES

8.1 Two main types of mitigation have/will be employed during the project:

- Mitigation at the design stage influencing the layout of the site; and
- Post design measures to be followed during construction, operation and decommissioning.

8.2 The layout of the extension to this wind park is such that adverse environmental effects have been minimised through the design process. This has minimised ornithological, ecological and cultural heritage impacts, reduced visual effects and ensured technical construction requirements are met.

8.3 Remaining effects will be mitigated by measures taken during construction and operation wherever possible, such as pollution prevention measures and a watching brief for archaeology during the construction phase of the development.

9 CONCLUSIONS

9.1 The final section of the Environmental Statement is a table summarising how important all the environmental effects arising from the construction, operation and decommissioning the wind turbines are. This table takes into account mitigation measures employed during the design stage and those mitigated measures which will be used throughout the lifetime of the project. The table shows that the key effects of the development relate to Landscape and Visual Impact.