

# West Ancroft Wind Farm







Sustainability Statement

March 2009

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## Executive Summary

### Introduction

This Sustainability Statement, prepared on behalf of E.ON Climate and Renewables (E.ON), accompanies a planning application for the development of an eight turbine wind farm scheme at West Ancroft, Berwick-Upon-Tweed. The proposed wind farm is located to the east of the A698 and the west of the A1 approximately 8km south of Berwick-upon-Tweed with the centre of the wind farm located at National Grid Reference (NGR) 397745, 644850. The planning application is for the construction, operation and decommissioning of eight 3-bladed, horizontal axis wind turbines and associated infrastructure (including an anemometer and onsite substation). The turbines will be limited to a maximum tip height of 115m above ground level and each turbine will have a rotor diameter of no more than 93m. This will allow for turbines with individual generating capacities of between 2 and 2.5MW and, dependant on the final choice of turbine, will give a combined installed capacity for the site of between 16 and 20MW.

This Sustainability Statement outlines the commitments made by E.ON to ensure that the project meets the criteria for a sustainable development.

### Economic

In light of regional, national and international targets to reduce greenhouse gas emissions and increase the proportion of energy derived from renewable sources, the proposed wind farm is considered financially viable under prevailing market and political conditions. The development will offer economic benefits in terms of access to employment opportunities, diversification of income for the landowner, and potentially a positive effect upon visitor numbers for local tourist attractions. Traffic generated by the wind farm is anticipated to be within the capacity of the local road network.

### Environmental

A full Environmental Impact Assessment (included with the planning application) has revealed few significant adverse impacts resulting from the wind farm. Where environmental risks do exist, for example with respect to biodiversity, noise, and visual amenity, appropriate mitigation measures have been devised and the current design has been amended to minimise anticipated effects. The major residual effect of the wind farm relates to its location within a region of high scenic quality.

### Natural Resources

The proposed wind farm will require limited materials in construction. The aggregate required for new access tracks and areas of hardstanding will mainly comprise material sourced off-site. Comprehensive waste management systems will be in place during construction and little water consumption is anticipated. In operation, the wind farm will generate limited waste and consume minimal energy, water and materials. The wind farm will be largely self-sustaining, requiring only infrequent maintenance visits.

### Social

This Sustainability Statement finds that the proposed development offers a number of social benefits, including investment in local community initiatives. The site has been designed to maintain public and occupational health safety, and to have minimal impact on the quality of the 'green' environment and amenity value of the land. Potential negative impacts, such as noise and effects upon visual amenity, have been controlled through design. Local people have been consulted over the proposals and will continue to be engaged through future phases of the planning process.

## **Local Sustainability Objectives**

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The overall findings of this Sustainability Assessment suggest a number of positive consequences of the proposed wind farm for the sustainability objectives defined by the Sustainability Appraisal (SA) of the Berwick-Upon-Tweed Core Strategy. In summary:

- The scheme helps to diversify the economy and generate employment;
- The scheme contributes to maintaining environmental quality and mitigating the impacts of climate change;
- The scheme makes prudent use of natural resources; and
- The scheme aims to secure the wellbeing and participation of local communities.

# 1 Introduction

## 1.1 Background

The Statement supports an outline planning application for the proposed West Ancroft wind farm development, to be submitted to Berwick-Upon-Tweed Borough Council.

The sustainability of the wind farm proposals has been reviewed using the Arup Sustainable Project Appraisal Routine (SPeAR<sup>®</sup>) as a framework. The SPeAR<sup>®</sup> framework is an accepted format for undertaking Sustainability Assessments and preparing Sustainability Statements for planning applications in the UK, and presents a rigorous methodology to ensure all key elements of sustainability are considered. This Statement therefore describes the commitments made by E.ON to ensure the efficacy of the proposed project with respect to four key areas of sustainability, namely: social; economic; environmental; and natural resources management.

The Sustainability Statement is presented as follows:

- Section 1:** Description of the site and project proposal (including description of the project development and design iterations;
- Section 2:** Methodology and scope of this Statement;
- Section 3:** Economic sustainability credentials of the proposed wind farm;
- Section 4:** Environmental sustainability credentials of the proposed wind farm;
- Section 5:** Natural resource sustainability credentials of the proposed wind farm;
- Section 6:** Economic sustainability credentials of the proposed wind farm; and
- Section 7:** Assesses the compatibility of the wind farm development proposals with local sustainability objectives.

## 1.2 Site Description

The West Ancroft scheme will be delivered within a 400 hectare (ha) site in north Northumberland. It is located approximately 8 kilometres to the south of Berwick-Upon-Tweed and around 9 kilometres to the west of the Northumberland coast, within a broader area known as Ancroft Moor. The centre of the site is located at National Grid Reference (NGR) 397745, 644850. The site is currently in the ownership of West Ancroft Farm (a private agricultural holding) and will remain in their ownership following commissioning of the wind farm.

The site consists predominantly of undulating agricultural land to the west of the A1 and due north of Haydon Dene woodland. The major land use within the site is arable (cereals), with small pockets of woodland conifer plantation scattered throughout. Field boundaries consist of fence lines, obsolete hedgerows, and scattered trees. The site is bisected by the B6354.

The site lies within an area identified in the North East Regional Spatial Strategy as particularly suitable for small or medium scale wind farms. As such, a number of other wind energy projects are proposed for the surrounding region, including at Barmoor, Moorsyde, Murton and Toft Hill. The Environmental Impact Assessment addresses the potential cumulative effects of these other wind farm proposals with the West Ancroft wind farm scheme.

## 1.3 Overview of Proposed Development

The planning application is for the construction, operation and decommissioning of eight 3-bladed, horizontal axis wind turbines and associated infrastructure (including an anemometer and onsite substation). The turbines will be limited to a maximum tip height of 115m above ground level and each turbine will have a rotor diameter of no more than 93m.

This will allow for turbines with individual generating capacities of between 2 and 2.5MW and, dependant on the final choice of turbine, will give a combined installed capacity for the site of between 16 and 20MW.

The layout for the site has been developed through reference to the environmental and technical constraints and mitigation opportunities emerging through the EIA processes. Though the area available for development covers approximately 400 hectares, the wind farm itself will occupy only approximately 5% of the available land due to the relatively small footprints of the infrastructure and due to the wind farm design criteria applied in the design process<sup>1</sup>.

The wind turbines would be installed on reinforced concrete foundations, established on excavated bed rock or on pilings depending on ground conditions. Reinforced concrete foundations would typically extend to a depth of 2m and a diameter of 16m by 16m, and would be concealed below the ground surface by ground restoration measures. The foundations will require the excavation of an area that is predicted to be up to 20m by 20m in area. It is envisaged that an area of hardstanding encompassing approximately 25m by 45m in area will also adjoin each turbine.

The grid connection for the proposed wind farm would be through an on-site substation building, to which the turbines will be linked via underground cables. To minimise ground disturbance, it is proposed that cables would be routed along the side of access tracks wherever possible. The substation building is likely to comprise of a hardstanding area containing the main equipment (isolators, circuit breaks, transformers etc.), and a single storey substation housing protection and control equipment.

A temporary construction compound and laydown of approximately 70m by 40m in area will be required, together with a circular reinforced concrete foundation for a permanent anemometer mast, which will be approximately 2.5m in diameter.

The turbines will be linked by a series of access tracks, themselves linked to the B6354 by new access tracks. Where possible, the proposed wind farm layout will utilise existing farm access tracks, but it will be necessary to construct approximately 5.4km of new access track. The track will be 5 metres wide, and up to 13 metres wide at the bends.

The proposed wind farm would have an anticipated operational lifespan of 22 years. Following this, unless further planning permission has been secured to extend its life or to re-power the development, the site will be decommissioned. In line with the Environmental Impact Assessment (EIA), this Sustainability Statement assumes that the wind farm will be decommissioned and the ground reinstated by the end of the 25 year consent period.

## **1.4 Design Process and Final Design**

### **1.4.1 Design Phase**

The layout of a wind farm has been informed by a range of technical, economic and environmental constraints including:

- Ground conditions - must be suitable for the installation of wind turbines, access tracks and cables e.g. avoidance of areas of unstable ground or areas of deep peat;
- Local topography can affect wind flow across the site and therefore can detrimentally affect turbine performance. Site topography must be carefully considered in the layout design process to ensure any detrimental effects are minimised;
- Buildings and other obstructions can create turbulence in the air flow and reduce turbine performance;
- Turbines must be separated by specific distances both perpendicular to, and in line with, the prevailing wind direction to minimise turbulent interaction between the wind

<sup>1</sup> As outlined in Chapter 3, Environmental Statement for West Ancroft Wind Farm.

turbines (i.e. wake effect) which can reduce turbine performance. Spacing requirements vary between turbine manufacturers and are also subject to wind conditions;

- Wind turbines have to be located at a distance sufficiently far from houses to protect local noise amenity and ensure shadow flicker impacts are minimised;
- The implications of locating turbines near environmentally sensitive features and areas (ecology, archaeology, hydrology etc.) need to be carefully considered;
- Landscape and visual design considerations also need to be taken into account;
- Whilst the wind turbines and their associated infrastructure typically occupy no more than 5% of a site, the existing use of the land is considered in the layout of tracks and turbines. For example, existing track lines are used where practicable;
- Available spare capacity of the local electricity grid to take power from the wind farm can dictate the overall size of scheme;
- In addition, planning guidance and discussion with statutory and non-statutory consultees, the local communities and the landowners influence the evolution of the design; and
- The design of West Ancroft Wind Farm has been planned in order to ensure maximum energy capture. The turbines are spaced far enough away from each other to ensure that they are each utilising their own energy thus increasing the overall output.

The planned layout for the proposed wind farm has evolved in response to a number of environmental and technical constraints, landscape design considerations; and as a result of feedback from key stakeholders, consultees and the public. A summary of the design review process is given in Table 4.1 below.

**Table 4.1: Design Iterations**

Iteration	Potential Adverse Impact Addressed	Detail of Change	Resulting Layout
Scoping Layout		Starting Point: Ten turbines with a rotor diameter of 92m and a hub height of 80m giving a maximum height of 125m. Turbines located to maximise generation potential.	Layout 1
Design Review 1	Detailed constraints mapping identified various features across the site, including the Cuddy Plantation in the centre of the site and the access track running south of the site from West Ancroft.	The mapping identified that the repositioning of Turbine 1 was required in order to minimise the impact on the woodland and accommodate for the 100m separation distance. The repositioning of Turbine 3 was required in order to accommodate for the separation distance required away from tracks.	Layout 2
Design Review 2	Initial noise modelling suggested greater separation required from neighbouring dwellings.	In order to achieve the reduction in noise levels and greater separation distance from neighbouring dwellings, the site design was reduced to 9 turbines.	Layout 3
Design Review 3	Detailed assessments found that various localities across the site could be potential habitats for various ecological species. This included the identification of a barn in the centre of the site, providing habitat for roosting bats. It also included hedgerows to the south of the site, which provide potential	Repositioning of turbine 6 and 7 was required to minimise the impact on ecological activity from turbines. This will limit the impact on the disturbance and impact on notable species associated with these features.	Layout 4

Iteration	Potential Adverse Impact Addressed	Detail of Change	Resulting Layout
	habitat for breeding birds. A minimum stand-off distance of 50m has been applied to hedgerows and 200m applied to bat habitats.		
Design Review 4	Following the initial landscape and visual assessments and consultation with political stakeholder, MEPS, MPs and members of the county, borough and parish councils, it was identified that the most eastern turbine was a visual impact from key viewpoints.	The visual impact was reduced by the removal of the most eastern turbine resulting in a revision to the site design. Furthermore following the public exhibitions on the 19 <sup>th</sup> and 20 <sup>th</sup> November 2008 the consultation engagement process resulted in the reduction of tip height from 125m to 115m.	Layout 5
Design Review 5	Following the public exhibitions further consultation identified an Orange Radiocommunications link traversing the site.	To meet the radiocommunications link recommended stand-off distance and provide sufficient separation between the turbines, the locations of turbines 1,4,5,7 and 8 were fine tuned.  Finishing Point: Eight turbines with a rotor diameter of 93m and a hub height of 68.5m giving a maximum height of 115m.	Final Layout

## 2 Methodology and Scope

### 2.1 Methodology

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This Sustainability Statement outlines the commitments made by E.ON towards the sustainable development of the West Ancroft Wind Farm. The review undertaken in preparing this statement has considered:

- Proposed Wind Farm Development at West Ancroft: Scoping Opinion (Letter from E.ON to Berwick-Upon-Tweed Borough Council, 22 November 2007);
- Scoping Opinion for Proposed Wind Farm at West Ancroft (Letter from Berwick-Upon-Tweed Borough Council to E.ON, 19 July 2008);
- West Ancroft Environmental Statement (March 2009);
- West Ancroft – a tourism impact report (Ray Hopper Associates, 2008);
- The North East of England Plan: Regional Spatial Strategy to 2021 (Government Office for the North East, July 2008);
- The North East Regional Renewable Energy Strategy (March 2005);
- West Ancroft – Statement of Community Involvement (E.ON, January 2009); and
- Design and Access Statement West Ancroft Wind Farm (March 2009).

This assessment was conducted to determine the sustainability credentials of the proposed wind farm at the point of submission of a planning application, using information gathered from the above documentation, discussions with the client team and assessments by independent specialists.

### 2.2 Scope

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The Statement follows the framework of the Arup Sustainable Project Appraisal Routine (SPeAR<sup>®</sup>), covering four key topic areas: the economic, environmental, natural resource and social sustainability of the development.

#### 2.2.1 Economic Sustainability

Economic sustainability addresses the issues of financial viability and wealth creation, and its distribution within and among communities. Within the scope of economic sustainability, consideration is given to:

- Securing financial viability;
- Maximising competition effects;
- Increasing employment/skills base;
- Promoting public transport systems;
- Optimising social benefits.

The economic sustainability of the proposed wind farm is assessed in section 3 of this assessment.

#### 2.2.2 Environmental Sustainability

Environmental sustainability is about maintaining the quality of the environment through a clear understanding of environmental effects, sensitivities and alternative solutions, keeping environmental impacts below the level required to allow the systems affected to recover and continue to evolve.

Within the scope of environmental sustainability, consideration is given to:

- Maintaining and protecting air quality;

- Ensuring sustainable land use;
- Maintaining and protecting water quality;
- Protecting and enhancing ecology and cultural heritage;
- Ensuring sustainable design and operations;
- Promoting sustainable transport options.

The proposed wind farm's environmental sustainability is detailed in section 4 of this Sustainability Statement.

### **2.2.3 Natural Resources**

Sustainable development involves using non-renewable resources more efficiently, increasing their productivity to ensure sustainable economic and societal growth without depleting stocks for future generations. Concurrently there must be a drive to develop alternatives that will replace their use. Sustainable resource use considers:

- Materials;
- Water;
- Energy;
- Waste Hierarchy.

Sustainable management of natural resources has been assessed in section 5 of this Statement.

### **2.2.4 Social Sustainability**

Social sustainability aims to improve quality of life through an understanding of the following issues:

- Facilitating social inclusion;
- Enhancing amenity value and accessibility;
- Optimising form and space;
- Maximising user comfort/satisfaction;
- Considering health and welfare.

The social sustainability credentials of the proposed wind farm are presented in section 6 of this Statement.

### **2.2.5 Local Sustainability Objectives**

E.ON is committed to delivering the proposed scheme in line with the overarching principles of sustainable development, and particularly with the sustainability goals and objectives of the local area and region. Section 7 of this Sustainability Statement therefore considers how the proposed scheme performs against the Berwick-Upon-Tweed Borough Council Local Development Framework (LDF) Core Strategy Sustainability Appraisal (SA) objectives. The local SA objectives have been taken to represent the best available reflection of local sustainability priorities, to which the West Ancroft proposals will seek to contribute.

## 3 Economic Sustainability

### 3.1 Securing Financial Viability

Under the Kyoto Protocol, the UK Government has a legally binding commitment to reduce emissions of six greenhouse gases by 12.5% below 1990 levels over the period 2008-12. Through the UK Climate Change Act<sup>2</sup>, the Government has built on this foundation with targets to reduce total UK greenhouse gas emissions by at least 80% on 1990 levels by 2050 and by at least 26% by 2020, with five year carbon budgets expected to be enforced.

The electricity sector is responsible for around 37% of the country's carbon dioxide emissions. According to figures from the former Department of Trade and Industry (a function now undertaken by the Department for Energy and Climate Change), in 2005 power stations alone were responsible for around 31.5% of carbon emissions<sup>3</sup>.

Wind farms, aside from the embodied carbon involved in construction and maintenance, constitute a zero greenhouse gas, zero waste method of energy generation and can play a pivotal role in meeting national emissions targets. Wind turbines are the most established form of renewable energy technology, with other technologies (e.g. tidal, wave and solar) lagging behind in terms of generating potential and commercial benefit.

Wind power takes the kinetic energy in the wind and converts it to electrical energy through the use of wind turbine technology. The modern wind turbine can generate electricity from wind speeds as low as 3m/s (7mph), and continues up to 25m/s (56mph). Average wind speed in the West Ancroft area is approximately 6.5m/s according to local weather stations and the Department for Business Enterprise and Regulatory Reform (BERR) Wind Speed Database<sup>4</sup>.

The 16-20MWe wind farm at West Ancroft will displace alternative forms of energy generation with a greater climate change impact. Based on British Wind Energy Association (BWEA) statistics, it is expected that the wind farm will displace between 16,561 and 20,702 tonnes of carbon dioxide emissions annually<sup>5</sup> (as compared with the emissions of a fossil fuel-based plant of equivalent size).

Onshore wind is currently the most commercially viable renewable energy technology in the world. According to the BWEA, the UK has the best wind resource in Europe, with the potential to meet the country's electricity needs eight times over. British wind farms are already producing enough electricity to power over one million homes.

UK Government recognises the benefits of renewable energy and is actively supporting the growth of renewable generation to tackle climate change and secure future energy supplies for the UK. The Renewables Obligation has been established, requiring electricity companies such as E.ON to source 15.4% of electricity from renewable sources by 2015 and 20% by 2020<sup>6</sup>. Wind energy's key role in delivering the UK's renewables policy means that the sector is expected to supply 7.5% of energy by 2010, equivalent to some 8,000MW of capacity<sup>7</sup>. Onshore, this equates to an additional 1500 new turbines, assuming an

<sup>2</sup> *UK Climate Change Act*, HM Government, November 2008. Available at <http://www.defra.gov.uk/environment/climatechange/uk/legislation/provisions.htm> (02.02.09).

<sup>3</sup> See [www.berr.gov.uk](http://www.berr.gov.uk) (02.02.09).

<sup>4</sup> Available at <http://www.berr.gov.uk/whatwedo/energy/sources/renewables/explained/wind/windspeed-database/page27326.html> (02.02.09).

<sup>5</sup> See BWEA calculations, available at <http://www.bwea.com/edu/calcs.html> (18.12.08). Based on an annual average rated capacity of 2MW per installed turbine, contributing emission reductions of 2260 tonnes of CO<sub>2</sub> each year.

<sup>6</sup> *The Renewables Obligation*, DTI. Available at <http://www.berr.gov.uk/whatwedo/energy/sources/renewables/policy/renewables-obligation/page15630.html> (02.02.09).

<sup>7</sup> *Results of Renewables Market Modelling*, report by Oxera for DTI (2004).

average size of 2MW. By diversifying and securing energy supply, the growth of the renewable energy sector will promote price stability.

Continued growth in the demand for power means the UK needs long-term investment in new generating capacity. Around 19GWe of generating plant will close by 2020. This capacity will need to be replaced by lower carbon alternatives. It is estimated that the West Ancroft wind farm could generate between 16 and 20MWe each year, sufficient electricity for the domestic needs of up to 10,500 households.

The Regional Spatial Strategy for the North East to 2021<sup>8</sup> seeks to ensure that investment is directed at development of alternative energy sources such as wind power, where appropriate, and to place the region at the forefront of innovation in energy efficiency and sustainable power generation. The plan's overall objective for energy is to ensure that the North East contributes to the Government's targets of reducing greenhouse gases and maximising energy generation from renewable sources. This is supported by the North East Regional Renewable Energy Strategy<sup>9</sup>, which provides a positive framework for planning renewable energy at a regional and local level, recognising that wind is the region's most significant renewable energy resource. These requirements make the West Ancroft wind farm viable under prevailing market conditions.

E.ON Climate and Renewables is one of the UK's leading renewable energy generation companies. E.ON currently operates 20 wind farms across the UK, totalling nearly 200MWe of capacity, or the equivalent electricity needs of approximately 350,000 households. A further 400MWe of wind farms have won consent for development across the UK. E.ON is heavily committed to the development of new wind and other renewable energy schemes, and has one of the largest renewable energy investment programmes in the UK. This includes a five year, £1billion investment plan focused on renewable energy and an aim to increase its wind farm generating capacity in the UK to more than 5000MWe by 2015.

### **3.1.1 Risk Management**

E.ON's Risk Management Executive meets monthly to discuss key risk and operational issues affecting the business, and to review regulatory risks. Risks are managed using an internal control framework. Risks are controlled and performance improved through planned, independent reviews conducted through an audit plan. The risk management system is being evolved to cover non-financial risks.

### **3.1.2 Displacement Effect**

During construction of the wind farm, it is anticipated that there would be some disruption to agricultural activities currently conducted within land under the ownership of West Ancroft Farm. However, this would be a temporary and reversible impact. Relatively little farmland would be lost through construction of the turbines, access tracks and grid connection building, and farming could continue as normal once the wind farm was operational.

The landowner would receive financial compensation for use of his land in the form of a set sum per MW of energy generated. Following commissioning of the site, the landowner would receive additional revenue through rental payments, thereby improving and diversifying the economic prospects of the farm.

The diversification of land use would therefore yield direct benefits, albeit to a limited number of individuals. Indirect benefits would be generated through the purchase of goods and services from nearby towns during construction and operation. The proposed development would not result in the closure or alteration of any community facilities within the local area.

<sup>8</sup> Communities and Local Government, July 2008. Available at <http://www.northeastassembly.gov.uk/page.asp?id=61> (02.02.09).

<sup>9</sup> North-East Assembly, March 2005. Available at <http://www.northeastassembly.gov.uk/document.asp?id=362&pageno=6&extlink=195> (02.02.09).

## **3.2 Maximising Competition Effects**

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### **3.2.1 Vitality and Regeneration**

There will be substantial capital costs associated with the construction of the West Ancroft wind farm, encompassing turbine supply, civil and electrical engineering. Local contractors would have the opportunity to tender for these works and the appointed contractor would be encouraged to use local firms and materials as far as possible. Similarly, materials required for the maintenance of the wind farm would be sourced locally wherever possible. The development would therefore precipitate local competition and bring vitality to the local economy.

Concern has been raised regarding the potential impact of the wind farm on tourist attractions and accommodations in the area. The Tourism Impact Report prepared for the site has concluded that the number of 'built' tourist facilities directly impacted by the proposal will be relatively small. A number of positive impacts may occur to certain local services, such as guest houses via maintenance contractors visiting the area and through specific interventions such as habitat improvement plans. Consultation with relevant parties exposed polarised views about the possible impacts on tourism, although the largest tourist operator in the immediate area of the proposed wind farm, Haggerston Castle, expressed no concern about the wind farm proposal and identified potential business benefits through additional visitors to the area.

Research has indicated that tourists' choice of destination is not unduly influenced by wind turbines, and there is no evidence to suggest that business investment and operational decisions are affected by the presence of turbines or perceived threats of their development.

The potential has been identified for residual adverse impacts on the value of properties around the site, due to deteriorated public perception of the area.

### **3.2.2 Supply Chain**

E.ON is a member of the UN Global Compact Network and operates a Responsible Procurement Policy specifying the minimum standard of Corporate Social Responsibility (CSR) performance expected of suppliers, their sub-contractors and business partners. The Policy is included in tender specifications and is a consideration whenever business is awarded to suppliers.

## **3.3 Increasing Employment and Skills Base**

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### **3.3.1 Employment**

Local employment patterns suggest a higher than average rate of unemployment in the Berwick area compared with the UK average. Both the construction and operational phases of the West Ancroft development have the capacity to generate a limited beneficial impact on direct employment in the local area.

#### **Construction Phase**

A workforce would be required for the construction phase of the wind farm, comprising of between 30 and 60 full time workers, dependent on the stage of construction. Local sourcing of contractors may create employment opportunities for communities surrounding the site, providing beneficial impacts for the local economy. Further indirect work opportunities may be created through local sourcing of materials.

#### **Operation Phase**

A small number of permanent jobs would be supported by the ongoing maintenance requirements of the wind farm during operation. The maintenance team would not be based permanently on the site, and would likely be responsible for maintenance of several other wind farms.

E.ON complies with the E.ON Group framework for equality and diversity, and is establishing a revised policy to promote diversity within the business.

### **3.3.2 Skills**

E.ON is a certified Investor in People and actively encourages staff learning and development, including technical apprenticeships, training and talent development programmes. Opportunities to develop personal and professional skills would be available to all E.ON staff assigned to the West Ancroft site.

## **3.4 Promoting Public Transport Systems**

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It is likely that the major transport impacts associated with the site would be linked to the movement of commercial heavy goods vehicles (HGVs) travelling to and from the site during the construction phase of the development. Deliveries will be made via the A1 and the B3654 towards West Allerdean to the west of the site.

There is no potential for the use of rail or water for freight transport to and from the site.

Once the wind farm is operational, it is envisaged that the amount of traffic associated with the scheme would be restricted to occasional service vehicles such as Land Rovers, with infrequent need for larger vehicles. Access tracks, comprising a geogrid membrane and crushed aggregate to reduce effects on the hydrological regime, would be constructed on-site to link turbines and the control compound, and to connect the site to the public highway network. It is estimated that a total of 5.4km of new access track would be required.

Given the isolated rural nature of the site, it is likely that all staff and visitor access would be reliant upon private road transport.

## **3.5 Optimising Social Benefits**

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E.ON has actively participated in engagement with local communities, including hosting a public exhibition and encouraging local views to be shared with the project development team. Induced benefits as a consequence of the scheme comprise a range of measures which include a significant contribution to renewable energy targets and attendant social benefits from displacing carbon from conventional sources of energy generation, diversification of income for the landowner, scheme induced labour during construction and operational phases and potentially, investment in local schemes intended to benefit the local community.

## 4 Environmental Sustainability

### 4.1 Maintaining and Protecting Air Quality

#### 4.1.1 Design Phase

Each unit of electricity generated via wind power displaces other forms of energy generation with higher associated greenhouse gas emissions and greater implications for climate change. The potential displacement of carbon dioxide as a result of operating the proposed West Ancroft wind farm is estimated to lie between 16,561 and 20,702 tonnes per year of operation<sup>10</sup>. Emissions of sulphur dioxide and nitrogen oxides would likewise be displaced<sup>11</sup>.

#### 4.1.2 Construction Phase

It is considered that there is potential for an increase in dust affecting the local area during construction, however levels would be minimised by the implementation of mitigation measures, including:

- Use of dust suppression facilities (e.g. water bowsers to dampen down risk areas);
- Screening or sheeting of storage areas and vehicles containing aggregate or fine materials;
- Wheel wash facilities for heavy goods vehicles; and
- Daily inspections of working areas to ensure removal of dust accumulation and spillages.

An assessment of the air quality effects arising from exhaust emissions of construction vehicles shows that predicted local impacts are of minor significance.

#### 4.1.3 Operation Phase

It is envisaged that the wind farm would have no significant impact on local air quality during operation.

### 4.2 Ensuring Sustainable Land Use

#### 4.2.1 Context

The site of the proposed wind farm consists almost exclusively of green field agricultural land, with large open fields punctuated by pockets of managed forestry. The hamlet of Ancroft Northmoor is located near the centre of the site. These existing land uses will persist following the commissioning of the wind farm.

There is a requirement in Northumberland to carry out site restoration and ground improvement for wind farm developments. E.ON has contacted the British Trust for Conservation Volunteers (BTCV) to secure their involvement and, thereby, the involvement of local community volunteers, in this aspect of the project. BTCV will tender to carry out necessary environmental upgrades, landscaping, habitat improvements, and post consent site maintenance.

#### 4.2.2 Planning Policy

In planning policy terms, the Regional Spatial Strategy (RSS) develops a range of policies which aim to promote the use of renewable energy sources and to reduce the use of non-renewable energy sources. In particular, the RSS states that:

*Strategies, plans and programmes, and planning proposals should:*

<sup>10</sup> *Supra* n5.

<sup>11</sup> See Table 1.3, Environmental Statement, Chapter 1.

- Facilitate the generation of at least 10% of the Region's consumption of electricity from renewable sources within the Region by 2010 (454MW minimum installed capacity);
- Aspire to further increase renewable electricity generation to achieve 20% of regional consumption by 2020; and
- Facilitate the achievement of a series of minimum sub-regional targets to 2010<sup>12</sup>.

Northumberland has a target for renewable energy generation of 212MW by 2010. If approved, the proposed wind farm at West Ancroft could account for up to 20MW – a significant contribution to the regional target. Policy 41 of the RSS identifies an area in the immediate vicinity of the proposed development site as offering potential for wind energy development, assessed in terms of the least constraints identified by the Regional Renewable Energy Strategy.

#### **4.2.3 Flood Risk**

The proposed scheme lies entirely within Flood Zone 1, according to Environment Agency (EA) flood maps. Flood Zone 1 is defined as an area having a less than 1 in 1000 annual probability of river or sea flooding in any given year (<0.1%). Following consultations with the EA it has been considered that a Flood Risk Assessment (FRA) is not required for the site, and Exception Tests need not be undertaken.

Increasing the total area of impermeable surfaces can result in negative impacts on flood risk and localised flooding. PPS 25: Development and Flood Risk<sup>13</sup> stipulates that flood risk should not be adversely affected by a development, either on-site or downstream. The development must therefore either have a positive or neutral net effect in terms of flood risk.

Areas of hardstanding or ground compaction, including access tracks, turbine foundations, crane hardstanding and the construction compound, are therefore anticipated to be compensated by the matching of existing conditions using suitable drainage and attenuation techniques. Access tracks will be constructed from graded stone and will remain relatively permeable. Likewise, the crane hardstanding will permit infiltration and only have a minimal impediment to surface water flow and drainage.

The turbine foundations will comprise of an impermeable reinforced concrete slab, however this is not considered to have any significant effect on drainage given the agricultural land use surrounding the turbines. Overall, the increased impermeable surfaces associated with the proposed wind farm are not considered to have a detrimental effect with respect to localised flooding.

#### **4.2.4 Ground Contamination**

There is little evidence to suggest that the proposed area affected by the wind farm has been subject to pollution or contamination in the past that could be mobilised during the construction period. Former contaminating land uses at the site are considered unlikely. A Site Investigation is to be undertaken prior to construction to inform detailed foundation design. In the event that contamination is identified, turbines will be micro-sited to avoid disturbance of contaminants. Where micro-siting will not avoid disturbance, any material excavated will be disposed of in compliance with relevant legislation.

<sup>12</sup> *Supra* n8. RSS Policy 29. As outlined in Table 1.2, Environmental Statement, Chapter 1.

<sup>13</sup> Communities and Local Government, December 2006. Available at [http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps25/\(02.02.09\)](http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps25/(02.02.09)).

## **4.3 Maintaining and Protecting Water Quality**

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### **4.3.1 Water Quality**

Best practice water quality management measures are proposed in order to protect against negative impacts to the water environment. Such measures will be based on Environment Agency (EA) and contemporary CIRIA guidance.

#### **Construction Phase**

The construction phase has the greatest potential for causing detrimental effects to local hydrological and hydrogeological features.

In compliance with EA restrictions, all construction-related activities will take place more than five metres from all surface water features. In addition, E.ON has adopted a voluntary buffer to restrict, where possible, all construction-related activities within 40 metres of all watercourses. Direct impacts upon river channels through the construction process are therefore considered negligible.

Movement and maintenance of vehicles on site can generate silt from wheel washing, general movement, and the transportation of fill and other construction materials. It is not, however, envisaged that large volumes of fill will be transported. Mechanisms adopted as part of a Construction Management Plan will minimise the potential impacts, including, for example, vegetated track margins to reduce potential sediment-laden run-off. Work taking place in proximity to the Coal Burn will adhere to Pollution Prevention Guidance (PPG) published by the EA, ensuring that the impact on the aquatic environment is minimised.

During construction excavation activities, soil scraping and vegetation removal will be undertaken. If stockpiled, this material can be easily transported by run-off to local watercourses. Best practice will be adopted to limit this impact, including minimising the storage time/area of stockpiling and implementing techniques such as silt fences.

#### **Operation Phase**

The likelihood of any impact to water quality occurring during the operational phase is significantly lower than during construction due to the reduction in potentially polluting and disruptive activities. During operation, on-site activities will be largely restricted to maintenance and associated vehicle access. Routine maintenance activities represent the only anticipated source of pollutants. Effective site management is considered to render this potential impact negligible.

Solid waste and foul effluent from staff facilities would be disposed at licensed facilities off site, in order to reduce risks of potentially polluting material affecting nearby water features.

## **4.4 Protecting and Enhancing Ecology and Cultural Heritage**

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### **4.4.1 Design Phase**

The layout of the proposed wind farm has been designed with the prevailing ecological and ornithological constraints of the site in mind. The presence of plantation woodland and hedgerows within the site has been a particular consideration, as these are the habitats where most breeding bird activity has been recorded. Access tracks, turbines and other associated infrastructure have been located away from these habitats where possible. The final layout for the wind farm is unlikely to have a significant impact on the ecological interest of the site.

Due consideration has been given to the location of infrastructure within the wind farm to avoid known archaeological remains. It is recognised that there exists a possibility of unknown remains and a targeted evaluation based around a Written Scheme of Investigation (WSI) is scheduled. The design development of the wind farm has recognised the potential effects associated with visual influence upon the setting of cultural heritage features and in line with addressing landscape and visual amenity matters, attempts have

been made to address the turbine configuration, layout and overall height to reduce effects as far as possible.

#### **4.4.2 Construction Phase**

In line with best practice sustainability guidance, a project ecologist will be appointed to advise the project manager of methods to minimise effects upon ecological assets and resources within the site. In particular, the project ecologist would provide on-site monitoring during construction. Through implementation of a Code of Construction Practice, construction-related impacts to the ecology of the site would be managed sensitively and effectively.

#### **Habitat**

##### ***Arable land***

The arable habitat is at risk of permanent loss in area and temporary disturbance due to construction of the wind farm and temporary construction compound. Arable land at the site is, however, considered to be of low ecological interest. Bird surveys show that the site is used by a range of bird species for nesting, feeding and loafing. Small habitat losses during construction<sup>14</sup> could impact marginally on the birds that use those habitats, although there is substantial alternative habitat available nearby. Working areas will be clearly marked to avoid unnecessary disturbance of habitats, and construction-related impacts to the site will be redressed on completion of works.

On decommissioning of the wind farm, built structures and access tracks would be removed and arable habitat easily recreated. Any adverse impacts are, therefore, temporary (although in some cases long-term) and fully reversible.

##### ***Hedgerows***

Whilst hedgerows within the site are considered to be of low ecological value, they may function as commuting corridors for wildlife such as bats. Although new access tracks will cross a number of field boundaries existing gaps in hedgerows will be used to accommodate the tracks wherever possible. Track construction is expected to require the removal of two six- or seven-metre sections of hedgerow. Resultant severance effects for wildlife would, however, be negligible and adverse impacts on the hedgerow resource are deemed insignificant.

To compensate for losses in hedgerow continuity, it is proposed to plant up any remaining existing gaps and create new hedgerows using local plant species such as hawthorn, blackthorn, crab apple and hazel. Hedgerows will be enhanced or created in areas away from the proposed turbines, creating habitat corridors designed to guide fauna away from these structures. Tree and shrub planting are also planned for the woodland strip to the west of the access track to Ancroft Southmoor, and along the coal burn in the north-east part of the site. This strategy will strengthen commuting routes and feeding areas that are known to be used by bats. Once mature, hedgerows are also likely to be used by nesting and commuting birds.

Existing hedgerows will be managed using appropriate methods, such as coppicing or laying, to improve their value to birds. Inclusion of broader field margins adjacent to hedgerows is also to be considered.

##### ***Plantation***

The majority of the plantation habitat within or adjacent to the site will not be affected by the development. However, two small areas of the Long Loanen plantation may be affected by construction of access tracks, resulting in the loss of a number of semi-mature trees. There may also be a requirement to remove some semi-mature conifer trees to accommodate an access track to Turbine 3. Due to lack of habitat diversity within the site, plantation habitat

<sup>14</sup> The area extent of which is outlined in the Ecological Impact Assessment.

is considered to be of local importance, however adverse impacts are not considered significant and the impact on birds is likewise considered to be limited.

### ***Wetland***

It is proposed to create a new wetland area on poor-quality grazing land adjacent to the site and existing wetland to the north-west of Ancroft Northmoor. Locally sourced material would be compacted to create a marshy habitat, which would later be seeded using a wetland seed mix. Once established, it is intended that the area will host waders and wildfowl and would strengthen the habitat value of the existing wetland. It is hoped that the area would become a foraging area, attracting bats away from the proposed turbine locations.

### ***Designated Conservation Areas***

There are no statutory or non-statutory designated nature conservation sites located within or adjacent to the proposed wind farm site. The nearest designated site is more than six kilometres from the site. It is unlikely that the proposed development will affect conservation objectives, either directly or indirectly at any phase of the project.

### ***Ornithology***

There is potential that noise combined with increased human presence during construction may cause disturbance of normal behaviour and detrimental impacts for certain sensitive bird species, e.g. ground nesting birds such as skylark. Noise and vibration may deter birds from breeding, feeding or roosting in the vicinity of the construction works. Disturbance effects may extend for some distance beyond the construction area. If undertaken during the nesting season, work may impact particularly upon the breeding success of birds associated with habitats directly adjacent to construction activities.

All works involving the disturbance or destruction of habitats would therefore take place outside of the breeding season, and at any time should be deferred if nesting birds are found to be present. Mitigation measures proposed through the EIA should reduce impacts on both breeding and wintering birds due to the construction phase of the project.

E.ON instructed the production of a Habitat Enhancement Report by Baker Shepherd Gillespie and the British Trust for Conservation Volunteers. The habitat enhancement plan seeks to protect the existing ecological interest of the site, where feasible. Furthermore, the proposed measures will be designed to increase the ecological value of the site without increasing the risk of an impact occurring during operation. Additional wetland areas, bat boxes, bird boxes and crop management are also part of the enhancement package for the proposed site. The implementation of the plan will result in the local countryside and landscaping around the proposed development repaired, restored and improved.

### ***Other Wildlife***

The site is considered to be of local importance for bats, hosting four bat species including locally scarce species. Bats are legally protected by both UK and European legislation. No known or potential bat roost sites are considered to be affected by the construction of the proposed wind farm, either directly or indirectly. The principal impact of construction on bats is through changes to commuting routes, however this is not considered significant beyond site level. It is proposed to carry out some additional shrub planting to strengthen hedgerows for feeding and commuting, with the objective to lead bats away from turbines. It is also suggested that two ponds be created to encourage bats to forage by Ancroft Southmoor and on the eastern side of the plantation to the north of Turbine 2.

Brown hare, a priority species listed under the UK Biodiversity Action Plan, have been regularly observed at the site and may be subject to disturbance-related impacts during construction. It is considered that sufficient area of arable land will remain unaffected, such that hares could relocate temporarily until construction is complete. No specific mitigation measures are proposed.

No otters, water voles or amphibians were recorded within the site. No badger setts or badger field signs have been recorded.

### **Cultural Heritage**

The construction phase associated with delivering supporting infrastructure and turbines are predicted to lead to visual impact on a number of cultural heritage features including Scheduled Monuments and listed buildings. This assessment was based upon features within 5km of the proposed West Ancroft Wind Farm. It is recognised that large scale plant movements (such as cranes) required for turbine erection will result in a temporary, reversible effect upon the visual setting of cultural heritage features.

### **4.4.3 Operation Phase**

#### **Habitat**

All wind turbines will be accessible via a network of access tracks. Following construction there are no anticipated further impacts on vegetation at the site. The land surrounding the turbines will remain as arable farmland. Routine maintenance will take place via the designated access tracks. Access tracks will be surfaced with open-cell blocks and re-seeded with a native wild flower and grass mix. Once re-vegetated, they would be managed in a similar way to grass margins elsewhere on the site.

There is consequently considered to be neutral impact on habitats and vegetation within the study area during operation. It is envisaged that agricultural land will be managed in order to enhance habitats for associated bird species, with the provision of un-harvested conservation headlands and 'skylark plots' within arable fields.

#### **Ornithology**

The operational phase of the wind farm has the potential to impact upon the ornithological interest of the site and surrounding area, either through behaviour modification associated with operational noise and visual disturbance from wind turbines, or through direct collision with rotor blades. There may be some additional low level disturbance from maintenance personnel visiting the site, although it is unlikely that this disturbance would exceed that associated with the current management of farmland.

The cumulative impact from the concentration of wind farm activity in the region is not considered important to local bird populations. Only small numbers of birds have been recorded to commute across the site, including from designated conservation sites to the east. It is considered that the operating wind farm will impose no significant impact to nearby conservation sites.

Impacts to individual bird species are not significant above site level. A minimum stand-off of 50m has been incorporated into the proposed site layout between turbines and hedgerows/boundary features, with the addition of a 100m buffer zone between turbines and woodland habitats to limit disturbance and displacement impacts on notable species. Existing hedgerows will be managed using suitable methods to improve their value to birds. Bird boxes would be erected on mature trees and specially erected poles around the site, with locations selected to coincide with habitats favoured by nesting and roosting birds. Provision of nest boxes should attract barn owls, wagtails, flycatchers, sparrows and tits to appropriate areas of the site. Erection of barn owl boxes will be particularly prioritised as this species is known to be present at the site.

#### **Other Wildlife**

Bats may be adversely affected by the operation of the wind farm. If it is assumed that bats are unlikely to be displaced by operating wind turbines and continue to forage in their traditional foraging areas, mortality through collision with rotating blades remains a possibility. Additional risks surround the changes in air pressure in proximity to functioning

turbines. Mortality may indirectly impact upon roost viability through loss of breeding adults, which may culminate in the loss of the roost.

Adverse impacts to the conservation status of bats are therefore considered a risk associated with the proposed development. The wind farm has been designed to reduce the risk of bat collision by locating turbines away from areas where bats are expected to forage.

Bat boxes are proposed for mature trees and specially erected poles located around the site, coincident with habitats known to be used by foraging bats or habitats that are to be enhanced for their benefit. Boxes would be installed following the guidance of the Bat Conservation Trust.

### **Cultural Heritage**

The landscape and visual assessment conducted for the scheme has informed the assessment of cultural heritage effects, particularly associated with setting issues, during the operational phase. It is recognised that the introduction of the turbines in particular have the potential to affect the setting of cultural heritage features within the immediate area of visual influence of the scheme, although these have in part been offset through sensitive design and mitigation.

#### **4.4.4 Decommissioning Phase**

##### **Habitat**

During decommissioning, unavoidable habitat loss will be minimised and disturbance will be avoided by site rules requiring all contractors and visitors to operate within works' boundaries. Pre-decommissioning ecological surveys will be undertaken and mitigation measures updated accordingly.

Arable and pasture habitat would be subject to short-term disturbance during removal of the wind turbines, largely due to the activities of heavy plant. The majority of impacts are likely to be localised and reversible, probably differing little from normal farming operations. Arable habitats can be easily recreated following the decommissioning of the development.

No impacts on hedgerow or plantation habitats are anticipated during decommissioning.

##### **Ornithology**

No additional impacts to bird populations are anticipated during decommissioning, over and above noise and disturbance generated by the dismantling and transportation of turbines from the site. These impacts are considered no more significant than effects experienced during construction.

##### **Other Wildlife**

No impacts on bat populations are anticipated; the infrastructure of the wind farm will be removed and habitats reinstated. No further habitat loss is envisaged.

Decommissioning phase impacts on brown hare and bird populations are likely to be restricted to minor disturbances during removal of turbines and associated infrastructure. The overall impact is considered significant at a site level, at worst.

### **Cultural Heritage**

It is expected that the effects on setting experienced during the construction period will be similarly experienced during decommissioning. Effects upon setting of cultural heritage features will be temporary and reversible where they are associated with plant and equipment employed for decommissioning activities.

## 4.5 Ensuring Sustainable Design and Operations

### 4.5.1 Design Phase

Section 1.4 of this Sustainability Statement provides details on the design iterations considered for the wind farm proposals at West Ancroft. The design has been informed by specific technical criteria associated with the commercial operation of a wind farm in this location and also the environmental and stakeholder considerations identified during the EIA process. The scheme presented for EIA scoping and initially under consideration was both larger in terms of numbers of turbines and in terms of overall dimension of the turbines. Repositioning of turbines was undertaken to minimise effects upon ecological assets; achieve noise criteria appropriate for neighbouring dwellings; reduce loss of visual amenity and landscape sensitivity and also to address technical issues surrounding telecommunications.

### 4.5.2 Operation

E.ON is active in the development of new low carbon technologies that can help to tackle the issues of climate change and security of energy supply. The wind farm at West Ancroft will employ best available technologies to provide an efficient supply of renewable energy to the UK market.

The chosen turbine manufacturer will be responsible for maintaining the wind farm for a defined period of time following commissioning, after which a qualified contractor will be employed to undertake biannual inspection and maintenance. Regular maintenance of the access tracks will likewise be undertaken, generally in the summer months when the tracks are dry, although safe access to all components will be maintained throughout the year.

E.ON operates Environmental Management Systems certified to ISO14001 to ensure that legal requirements are met and to help manage environmental risks arising from the operation of its plant. E.ON's staff are trained in methods of environmental management and generally exhibit high levels of environmental awareness.

### 4.5.3 Decommissioning Phase

The planning consent for the site will be valid for 25 years. All post-consent activities associated with the development, operation and decommissioning of the scheme will be undertaken within this period. The EIA has assumed that pre-construction works, construction works and decommissioning will each take one year. The wind farm will thus be designed with an operational life of 22 years. At the end of this life, a number of options exist:

- The site will be decommissioned and turbines removed;
- An application will be made to extend the operational life of the site using the existing equipment; or
- An application will be made to replace the existing equipment with new equipment.

In the event that the first option prevails, the wind farm will be decommissioned in accordance with best practice and/or in compliance with planning conditions. All above-ground structures and equipment will be removed from the site; cables will be cut to at least one metre below ground (but otherwise left in situ); and the base of turbines will be cut off below ground level and covered with topsoil to encourage regeneration. Access tracks would either be left for use by the landowner or, where appropriate material was available, may be covered with topsoil and temporary edging removed to allow recolonisation. The environmental effects of this approach to decommissioning are considered to be less than those arising from the break up and removal of road and turbine foundations from the site.

A decommissioning plan will be prepared by the wind farm operator and agreed with the relevant authorities prior to any decommissioning, taking account of new legislation, guidance and best practice.

## **4.6 Promoting Sustainable Transport Options**

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### **4.6.1 Freight Traffic**

It is likely that the main transport impacts associated with the wind farm will be associated with the movement of commercial heavy goods vehicles (HGVs) travelling to and from the site during the construction phase of the development, carrying materials and equipment. Once the wind farm is operational, it is envisaged that the amount of traffic associated with the scheme would be minimal.

### **4.6.2 Employee Travel**

Given the isolated rural nature of the site, staff and visitors are expected to be reliant upon private road transport, however visits would be infrequent. A travel plan is not being prepared for the site, as its traffic generation is under that which requires travel plans.

## 5 Natural Resources

### 5.1 Materials

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#### 5.1.1 Construction Phase

The design and composition of the proposed wind farm will require limited supplies of construction materials compared with other energy generation developments.

It is envisaged that local materials will be utilised as far as possible. The aggregate required for sections of new access tracks and areas of hardstanding will be sourced locally as far as possible. In the event that sufficient on-site sources of material cannot be identified, there may be a need to import some material from off-site sources. Concrete for the turbine foundations will either be imported from a local batching plant, or a concrete batching plant will be established on site. The final choice will depend on the chosen contractor and the availability of local concrete.

#### 5.1.2 Operation Phase

The operation of the site will utilise almost zero raw materials, drawing only on the renewable resource of the wind for energy generation.

### 5.2 Water

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#### 5.2.1 Construction Phase

During construction, the impact significance of environmental risks, including water use, will be minimised through employment of a Code of Construction Practice (CoCP). This Code will reduce the risks of all activities that have been identified as having a potential negative impact on the environment of the site and surrounding area. This will include the adoption of appropriate guidelines and best practice.

#### 5.2.2 Operation Phase

Owing to the nature of the development and low sensitivity of water resources in the area, the implications of the wind farm in terms of water use are negligible. It is not considered that the operational phase of the development will have any significant impact upon water resources. Where practicable, water efficient fittings will be employed within the welfare buildings.

### 5.3 Energy

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#### 5.3.1 Construction and Operational Phases

It is recognised that the construction process will require on site generation of energy to support plant and equipment. A Code of Construction Practice will be employed to ensure diesel generators and other forms of plant and equipment on site have engines running only when necessary and energy conservation will be a key feature of the construction process. The operational phase of the wind farm will require only periodic maintenance and being largely self-sustaining, the wind farm will require limited on site energy requirements.

### 5.4 Waste Hierarchy

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#### 5.4.1 Construction Phase

Construction waste will be recycled or reused where possible, in accordance with a Site Waste Management Plan.

Topsoil will be removed from the proposed construction areas and stored on-site for reinstatement and land restoration following construction. It has been estimated that each turbine foundation will result in approximately 350m<sup>3</sup> of surplus material. It is anticipated that this surplus material will be reused on site for landscaping. Disposal is not envisaged. If, however, it becomes necessary to remove surplus topsoil or other arisings from the site,

consent will be sought from the planning authority prior to its removal and reuse and/or disposal, in line with the waste hierarchy.

#### **5.4.2 Operation Phase**

The nature of the development means that a minimum of waste will be generated through operation of the wind farm. A recycling strategy will be put in place to ensure that everyday wastes, such as paper, produced at the substation are recycled where possible. This is standard practice for E.ON and would form part of a site Environmental Management System.

## 6 Social

### 6.1 Facilitating Social Inclusion

To date, E.ON has demonstrated a strong approach to corporate social responsibility, placing significant emphasis on supporting community projects with direct relevance to core business areas. Historically, these have included:

- Projects with Age Concern, Social Services and Carers' Associations to deliver utilities-related support for older people during the winter months and in emergencies;
- Creation of a web resource and associated fund to support development of efficient and sustainable energy measures for community organisations; and
- The Central Networks Safer Environment Fund, which supports community projects which have a positive and enduring impact on the local environment.

E.ON has close relationships with the National Trust, Business in the Community, Education Business Partnerships and Sharing the Caring. Social responsibility is reported annually via a Corporate and Social Responsibility report, which follows the Global Reporting Initiative (GRI) G3 guidelines.

This strong approach to social welfare focuses particularly on communities surrounding the E.ON estate and energy generation plant. E.ON works with local schools to directly support curriculum-based learning, sporting initiatives and awareness of safety issues associated with power generation and supply.

There is a corporate commitment to establish Community Investment Funds in the areas surrounding E.ON facilities, a custom which will be fulfilled at West Ancroft with funds of £1500 per installed MW allocated to local community projects during each year of the wind farm's expected 22 year operational life, in line with a Northumberland community involvement plan. The fund is intended to be one of a number of measures targeted at benefiting those closest to the site. The developer intends to engage with stakeholders to implement fuel poverty initiatives and energy saving proposals.

E.ON is sponsoring and intends to have a significant presence at the 'Borders Green Festival', a Berwick-based community event focused on a strong 'green' message. Information will be provided on potential microgeneration support via the E.ON Source fund, which could be used to provide locals with a lower fuel tariff in line with requests from the Moorsyde Action Group.

### 6.2 Enhancing Amenity Value and Accessibility

#### 6.2.1 Landscape

##### Design Phase

The visual impact of a wind farm development represents one of its most significant local effects. The wind farm proposed for West Ancroft will alter and diversify certain views over the rural surroundings.

The scheme lies within an area afforded the local planning designation of 'Intermediate Area of Landscape Value'. National Cycle Route No.1 lies to the east of the site, whilst beyond the B6353 to the south is Barmoor Castle, an 'Area of High Landscape Value'. This area extends to an eastern boundary approximately 8km from the site, and northerly along the Scottish borders approximately 4km from the site. The Northumberland Coast 'Area of Outstanding Natural Beauty' (AONB) lies approximately 6km to the east, incorporating Holy Island and the Farne Islands. The broader area includes the Northumberland National Park and Conservation Areas at Berwick and Norham. The historic and cultural sensitivity of the landscape is a fundamental consideration for the planning of the proposed wind farm and

these factors have been considered in minimising the visual impact on sensitive receptors. The most significant effects were considered to be related to:

- Open access land and other recreational users within 15km;
- Settlements within 2-10km;
- National Park / AONB / National Trails within 10km; and
- Roads within 5km (although lower sensitivity users).

E.ON continues to refine the Habitat Improvement Plan for the site to enable site screening from specific properties with special reference to those at Allerdean Greens.

The design of the West Ancroft site has taken into account regional identity to minimise potential negative impacts on local amenity value. The design of the control building will be sympathetic to the local area, and will be agreed with the local planning authority prior to construction. The green space character of the area will be retained.

### **Construction Phase**

The local area is traversed by several tracks and Public Rights of Way, which are subject to seasonal and predominantly agricultural usage. Certain pathways may require closure during construction. Agreement would be obtained from the Public Rights of Way Officer prior to closure, with a method statement and diversion plan provided.

A temporary construction compound is to be erected during construction of the wind farm, to house portacabins; storage containers for tools and equipment; storage areas for plant, material and components; wheel wash facilities; and parking for deliveries, workforce and visitors. The compound will be built to best practice environmental design standards, and will be removed following the construction phase. The area will be reinstated using topsoil and turf from the site, having no lasting impact on landscape quality.

### **Operation Phase**

All public rights of way will be reinstated on commissioning of the site for operation and there will be no permanent closure or diversion of any routes. Despite a number of construction phase impacts on the aesthetic value of the local environment, site restoration works will be programmed and carried out to allow progressive restoration of disturbed areas as early as possible. The proposed turbine model is to be coloured grey or white, with a semi-matt finish to maximise uniformity with the background sky and to minimise reflectivity. No company logo will be featured on the turbines, subject to aviation requirements.

The long-term effect on the public amenity value of the site is anticipated to be negligible. The Civil Aviation Authority (CAA) and the Ministry of Defence (MoD) have been consulted on the development proposals, with both parties responding with no objections to the scheme. It is anticipated that existing land management practices will be unaffected by the proposed development.

## **6.2.2 Noise**

### **Construction Phase**

Construction is expected to take between nine and twelve months. A range of activities would take place within the site during this period. Activities with the greatest noise potential are likely to be concentrated in the earlier stages of the development, although noise will be controlled as far as possible through mitigation measures, including compliance with good practices as described in BS 5228: Noise and vibration control on construction and open sites. It is possible that construction noise may be perceptible by nearby residents, however it is considered unlikely that this will present a nuisance.

The timing of construction activities would be agreed with Environmental Health Officers prior to commencement of construction, and deliveries of plant, material and components will be undertaken as far as possible to reduce noise effects.

### **Operation Phase**

The noise assessment methodology ETSU-R-97 (1996), as recommended by PPS 22: Renewable Energy<sup>15</sup> for the assessment of operational noise from wind farms in the UK, has been applied to the proposed West Ancroft wind farm to determine likely changes in background noise levels as a result of the wind farm. The guidance suggests that noise limits should be set at 5dB(A) above existing background noise levels, subject to fixed minimum limits. Different limits also apply to those properties with a financial interest in the wind farm scheme. Noise monitoring has been undertaken at specific locations in consultation with the Environmental Health Officer, and the site will be designed to ensure compliance with recommended noise limits. It is assumed that if noise limits are achievable at these locations, more distant receptors will also be compliant.

E.ON's Environmental Management Systems (EMS) for energy generation sites include a specified procedure for logging and responding to public complaint regarding noise and acting to prevent reoccurrence. The West Ancroft wind farm will conform to this EMS.

The operation of the wind farm is considered unlikely to significantly affect traffic volumes on surrounding roads, and as such will not result in undue increases in traffic noise.

### **6.2.3 Access**

Access to the site is likely to be from the north east via the B6354, although feasibility studies are currently underway to determine the most appropriate route. Existing road infrastructure will be enhanced and on-site access linking turbine locations and the substation will be upgraded in line with the requirements of the development. The on-site track layout has been designed to utilise existing agricultural tracks, and where new tracks are required these will run along field boundaries to minimise intrusion on to productive agricultural land.

### **6.2.4 Radiocommunications and Aviation**

Wind turbines have the potential to interfere with the operation of radiocommunication equipment. An assessment has been undertaken into the impacts of the proposed wind farm on radiocommunications, television, reception, aviation and military interests in the vicinity of West Ancroft. Due to the anticipated conversion from analogue to digital broadcasting across the Berwick-Upon-Tweed area by 2012, before the expected commissioning of the wind farm, no impacts on television reception are anticipated. Potential impacts to infrastructure and communication links have been identified and mitigated through the design process as the turbine layout has evolved.

## **6.3 Optimising Form and Space**

A steel palisade security fence may be erected to surround the substation compound, controlling access to the core of the site in order to maintain public safety and security. The inaccessibility of this area of the site will represent a change in status from public to private realm.

The area surrounding the site is rural in nature, located within Ancroft Parish. The local community comprises mainly farmsteads and isolated cottages. Due to the scattered settlement pattern, the wind farm is not anticipated to have any significant impact on community severance.

<sup>15</sup> Communities and Local Government, August 2004. Available at [http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps22/\(02.02.09\)](http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps22/(02.02.09)).

The substation structure will accommodate core staff facilities, including an office, welfare facilities and toilets for visiting staff.

## **6.4 Maximising User Comfort / Stakeholder Satisfaction**

### **6.4.1 Design Phase**

E.ON is committed to working with the local community, and welcomes and supports communication with all stakeholders to improve understanding of concerns. A comprehensive public consultation programme has already commenced to both inform and seek feedback from interested parties about the proposed development. Key components of the programme include:

- Discussions with the Moorsyde Action Group and West Ancroft Community Action Group;
- All properties and Parish Councils within 5km of the site sent an introductory leaflet and invitation to public exhibitions;
- Residents living closest to the site offered one-to-one visits by the E.ON Project Developer and lead consultant able to interpret noise data collected on the property, to discuss the proposed development;
- Public exhibition held locally over two days, from 1200 until 1800, drawing over 200 attendees; and
- Contact point established for project information, contactable online via the E.ON website and attached 'blog', along with a project-specific email address.

Issues arising during public consultation have been considered during design reviews, and E.ON has ensured that the design, construction and operation of the proposed wind farm and its residual impacts on local residents are reduced to a practical acceptable minimum.

E.ON has additionally contacted stakeholders including the Northumberland Wildlife Trust, Royal Society for the Protection of Birds (RSPB), BTCV, and local agricultural groups. Friends of the Earth and a local equestrian organisation were also consulted, along with a model aircraft flying club, the owners of a large touring and static caravan site, and the owners of a large country estate to the south of the site.

Consultation with other interested parties has included the CAA and MoD, neither of whom reported any objection to the development. Ofcom has been consulted with respect to the potential interference of radiocommunications links in the vicinity of the site. The only party to object to the scheme is the Joint Radio Company (JRC), as the proposed scheme could potentially affect one link licensed to Scottish Power. However, mitigation measures are available to remove the objection, and it is the intention of E.ON that such issues will be adequately addressed.

### **6.4.2 Construction Phase**

Images and relevant documentation concerning the scheme (e.g. the Environmental Statement) will be posted on the West Ancroft public website. A 'meet-the-buyer' event is also anticipated for all interested parties, along with regular newsletters throughout the construction period.

### **6.4.3 Operation Phase**

E.ON has a public commitment to reduce the number of complaints lodged by customers with the consumer watchdog, Energywatch. At the end of 2006, E.ON was placed second in Energywatch's league table, recognising E.ON's low number of customer complaints.

In terms of staff satisfaction, E.ON is an accredited Investor in People. The 2005 Employee Opinion Survey showed that staff have a sense of pride and shared identity through being part of the E.ON Group.

## 6.5 Considering Health and Wellbeing

### 6.5.1 Occupational Health and Safety

E.ON implements Safety Management Standard OHSAS 18001, and views health and safety as its number one priority. The design of the proposed wind farm will incorporate features that ensure satisfaction of E.ON's statutory responsibilities under Acts of Parliament such as the Health and Safety at Work Act 1974. Where appropriate, the Health and Safety Executive (HSE) will be consulted about safety issues associated with the development. Planning and management throughout the design and construction of the wind farm will comply with the Construction (Design and Management) Regulation 2007.

E.ON offers a comprehensive package of benefits to ensure the health and wellbeing of employees, including:

- Employment policies regularly reviewed to ensure that they support flexible and family-friendly working;
- Provision of Employee Assistance Programme providing free and confidential advice for all employees, as well as an Occupational Health helpline; and
- An Active Energy programme providing voluntary health assessments, including advice and follow-up care on stress, lifestyle and diet.

### 6.5.2 Public Health and Safety

During construction, the relevant statutory requirements with respect to public safety will be implemented. Potentially hazardous areas, such as excavations and electrical installation works, would be fenced off and unattended machinery would be secured to prevent unauthorised use.

Wind turbines installed at the site would comply with BS EN 61400-1: Wind turbines, Design Requirements (2005), which specifies essential design requirements to ensure the engineering integrity of wind turbines. Its purpose is to provide an appropriate level of protection against damage from all hazards during the planned lifetime. Therefore, there will be no safety implications for people using the local area.

Impacts on public safety as a result of the build-up of ice on wind turbine blades will be mitigated through the installation of vibration sensors, which will identify ice build-up and cease operation, thereby avoiding any potential incidence of ice throw.

A shadow flicker analysis has been undertaken for six dwellings lying within 970m of the proposed turbine locations. As a worst case scenario, it is possible that one of the identified dwellings may be exposed to shadow flicker during 43 hours per year. The frequency at which this would occur is significantly below that at which photosensitive epilepsy is usually induced. No adverse health effects are anticipated due to shadow flicker at West Ancroft. If any nuisance is caused, appropriate mitigation strategies may be developed to control the effects.

E.ON actively promotes health and safety to schools and other groups. This includes an objective to ensure as many people as possible have access to sport at all levels. Sporting initiatives have arisen out of E.ON's sponsorship of the National Rugby Community Programme and rugby league Champion Schools Tournament, and of the FA Cup, FA Women's Cup, FA Youth Cup and the FA Schools' Programme.

## 7 Local Sustainability Objectives

### 7.1 Berwick-Upon-Tweed Local Development Framework

In accordance with the new planning system<sup>16</sup>, Berwick-Upon-Tweed Borough Council has published its Core Strategy as the first of the main Development Plan Documents (DPDs) within the Borough Local Development Framework (LDF). The Core Strategy sets out the future objectives and strategies for the conservation and development of the area, against which planning applications will be assessed.

Under the Planning and Compulsory Purchase Act 2004, all DPDs are subject to a Sustainability Appraisal (SA). Through the SA, key sustainability issues are identified for the region and objectives are defined to ensure that plans, policies and programmes are inherently sustainable. All DPDs and Supplementary Planning Documents (SPDs) incorporated within the LDF are tested against the Core Strategy SA objectives.

The Core Strategy SA objectives for the borough of Berwick-Upon-Tweed are grouped into four key areas, which shadow the chapters of this Sustainability Statement:

- i) Economic: Maintenance of high and stable levels of economic growth;
- ii) Environment: Effective protection of the environment;
- iii) Natural Resources: Prudent use of natural resources; and
- iv) Social: Social progress which recognises the needs of everyone.

A brief assessment of the West Ancroft wind farm proposals has been undertaken to summarise the extent to which they respond to the Berwick-Upon-Tweed LDF sustainability objectives.

### 7.2 Performance Against Berwick-Upon-Tweed Sustainability Objectives

To ensure that the West Ancroft wind farm proposals are consistent with the sustainability objectives outlined in the Berwick-Upon-Tweed Borough Council LDF, a qualitative review of the outline proposals against the Core Strategy SA objectives has been undertaken, and is summarised below.

The scheme has been reviewed against each of the objectives and an observation has been made as to whether the scheme is aligned, neutral or conflicting with each objective.

Due to the nature of the proposed development, some of the SA objectives will not be directly applicable to the proposed scheme and therefore the West Ancroft wind farm will contribute neither positively nor negatively.

This assessment is undertaken as a means of demonstrating the compatibility of the scheme with local sustainability objectives, and to identify potential conflicts. It does not constitute a formal legislative requirement. The purpose of the following is to demonstrate E.ON's commitment to best practice and to delivering a development which meets the sustainability objectives of the local area.

### 7.3 Methodology

The following sections summarise the ways in which the proposed West Ancroft development responds to the four core areas of sustainability identified for the Berwick-Upon-Tweed region.

The summary statements draw on the evidence tables presented in Appendix A. The tables outline the individual sustainability objectives associated with each headline theme, and

<sup>16</sup> Town and Country Planning (Local Development) (England) Regulations 2004.

assess the wind farm's contribution towards achieving those objectives. The following categorisation has been used:

- **+** : Where the wind farm proposals contribute positively to achieving the stated objective;
- **0** : Where the wind farm proposals present neither gains nor losses to the stated objective compared with the baseline state;
- **-** : Where the wind farm proposals impact adversely on the stated objective.

The Appendix outlines evidence to support the assessment, and reference is made to further information provided elsewhere in this report.

#### 7.4 Maintenance of High and Stable Levels of Economic Growth

Sustainability Objective		+	0	-
1	Improve, broaden and diversify the economy of the Borough while enhancing areas of inequality, particularly the rural economy.			
2	Provide opportunities for all to well-paid employment within the Borough.			

The West Ancroft development proposals are considered to have a positive impact in terms of broadening the economic base of the area and providing employment opportunities, both during construction and operation phases. Benefits identified in this Sustainability Statement have included the contribution made by the development towards leading the region forward into the low carbon economy; the diversification of agricultural income for landowners; and the provision of construction and maintenance jobs connected with the wind farm.

#### 7.5 Effective Protection of the Environment

3	Protect and enhance the significant culture and heritage of the Borough.			
4	Protect and conserve the historic built environment.			
5	Protect areas of high landscape quality.			
6	Protect, maintain and enhance biodiversity in all areas of the Borough.			
7	Improve access to sustainable forms of transport and reduce the need to travel by car.			
8	Protect and improve the water quality and water resources of the coast, rivers and groundwater.			
9	To address the causes of climate change through reducing emissions of greenhouse gases and ensure Berwick Borough is prepared for associated impacts.			

The particular environmental strength of the development plans lies in their contribution to addressing the causes of climate change, with benefits to be reaped locally, nationally and internationally through the anticipated displacement of carbon emissions from energy generation.

Given the relative absence of known cultural and historic sites surrounding West Ancroft, the direct impact of the proposed wind farm on the cultural, historic and heritage value of the area is considered to be limited. Likewise, if mitigation measures are implemented, as

proposed in the EIA accompanying this planning application, the scheme is considered to have an insignificant effect on biodiversity and water resource objectives.

Negative environmental impacts are expected to arise in terms of the development's effect on landscape character, especially in terms of local visual amenity.

The development plan also registers a negative outcome in terms of transport impacts, though this is due only to the fact that the site is located such that it is only accessible by road transport. This factor should be considered in light of the anticipated low frequency of visitors to the site.

## 7.6 Prudent Use of Natural Resources

10	Improve efficiency in land use through the re-use of previously developed land (including contaminated land) and existing buildings, including re-use of materials and promotion of sustainable design.			
11	Reduce waste generation and disposal and achieve the sustainable management of waste.			
12	Increase energy efficiency and the proportion of energy generated from renewable sources.			

The West Ancroft proposals are considered to have a neutral impact in terms of the objective to improve efficiency of land use. Despite the wind farm's utilisation of a green field site, the existing agricultural use of the site will not be significantly altered by the development.

Positive effects are anticipated in terms of waste management due to plans in place to manage waste streams arising during construction. During the operation from the site, waste arisings are expected to be negligible.

The contribution of the site to generating energy from renewable sources is undeniable and offers significant advantages to meeting regional and national energy targets.

## 7.7 Social Progress which Recognises the Needs of Everyone

13	Improve levels of, and provide access to, educational attainment, qualifications and skills in all sections of the community throughout the entire lives of residents.			
14	Ensure everyone has access to good quality affordable homes that meet their needs.			
15	Rebalance the population structure of the Borough.			
16	Continue to improve Community Safety and reduce Crime and Disorder.			
17	Protect and enhance access to public leisure services and communication infrastructure.			
18	Improve the health and wellbeing of the population, reduce health inequalities and improve accessibility to health and social services.			
19	Encourage, support and develop the existing social network of parish councils, development trusts, community, volunteer and support groups.			
20	Improve working environments and public spaces.			

Given the type of development, the proposals are not considered to impact significantly on objectives to improve educational attainment and access to housing, to rebalance the population structure of the Borough, enhance leisure and communication services, or to improve working environments.

A robust set of safety and security measures are intended for the site, which are considered to contribute positively to local safety objectives. Likewise, best practice measures are proposed to secure the health and wellbeing of staff, visitors and local residents.

E.ON's initiatives in the community are a particular strength of the site proposals, both in terms of stakeholder engagement and in funding the activities of community groups. These features are seen as a positive contribution in supporting and developing the local community network.

## 8 Bibliography

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Appendix A

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**Performance Against  
Berwick-Upon-Tweed  
Sustainability  
Objectives**

Sustainability Objective		+	0	-	Evidence	Section
<b>i) Maintenance of high and stable levels of economic growth</b>						
1	Improve, broaden and diversify the economy of the Borough while enhancing areas of inequality, particularly the rural economy.	■			The wind farm will contribute a viable, sustainable and long-term industry for the area, helping to diversify the economy away from dependency on agriculture.	3.1
					Compensation and land rents will provide an additional revenue stream to support the income of the landowner.	3.2
2	Provide opportunities for all to well-paid employment within the Borough.	■			The development will stimulate short-term local employment in construction, materials supply, and other support industries.	3.3
					E.ON is a high profile and international company. The firm's presence in the area and advertisement in local media will promote job opportunities within the firm.	3.3
<b>ii) Effective protection of the environment</b>						
3	Protect and enhance the significant culture and heritage of the Borough.		■		The proposed development does not impact directly on any sites of cultural or heritage value.	4.4
					The wind farm may have detrimental impacts on local property prices due to a deteriorated perception of the area as a place to live.	3.2
4	Protect and conserve the historic built environment.		■		The proposed development does not impact directly on the historic built environment.	4.4
					The development is not considered to impact negatively on surrounding "built" tourist attractions, and may offer positive effects through drawing additional visitors.	3.2
5	Protect areas of high landscape quality.			■	The wind farm will be located in surroundings which are subject to a number of designations for landscape value. The impact on a number of landscape receptors is deemed moderate / severe.	6.2
6	Protect, maintain and enhance biodiversity in all areas of the Borough.		■		With the implementation of appropriate mitigation measures, impacts on biodiversity in the local area are considered insignificant.	4.4
7	Improve access to sustainable forms of transport and reduce the need to travel by car.			■	The isolated nature of the site requires private transport for access. However, the requirement for access during operation of the site is expected to be minimal.	4.7 / 3.4
8	Protect and improve the water quality and water resources of the coast, rivers and groundwater.		■		Appropriate management practices will be implemented during design, construction and operation to mitigate impacts to local water quality.	4.3

				Water use will be minimised during construction.	5.2
				The nature of the development and low sensitivity of local water resources means that impacts to water resources during operation will be negligible.	5.2
9	To address the causes of climate change through reducing emissions of greenhouse gases and ensure Berwick Borough is prepared for associated impacts.			The proposed wind farm addresses the causes of climate change by displacing alternative, more polluting forms of energy generation. The wind farm thereby contributes to local, regional, national and international greenhouse gas reduction targets.	3.1
				The wind farm will help to diversify energy supplies to the National Grid, thereby contributing to energy security in the face of future environmental change, population increases, and natural resource depletion.	3.1
<b>iii) Prudent use of natural resources</b>					
10	Improve efficiency in land use through the re-use of previously developed land (including contaminated land) and existing buildings, including re-use of materials and promotion of sustainable design.			The wind farm proposals will be brought forward on a greenfield site which has previously been in agricultural use. Agricultural use of the site will continue following commissioning of the site for energy generation. Buildings will not be disturbed.	4.2
				The site is not considered vulnerable to flooding, up to the 1 in 1000 year flood return period. Appropriate procedures will be implemented to minimise the impact of the site on local drainage patterns.	4.2
				There is limited evidence to suggest that the site has been subject to land contamination. Appropriate management procedures will be adopted to avoid disturbance of any contamination identified.	4.2
				The wind farm will be designed for a lifetime of approximately 25 years. A decommissioning plan will be developed to ensure minimal long-term impact on the surrounding area.	4.6
				The wind farm will be designed such that its operation will impact negligibly on the existing agricultural land use and local environmental quality.	4.6
11	Reduce waste generation and disposal and achieve the sustainable management of waste.			Waste generated during construction will be recycled or re-used on-site wherever possible. Operation of the wind farm will entail minimal waste generation. Waste will be managed in accordance with best practice.	5.1
12	Increase energy efficiency and the proportion of energy generated from renewable sources.			West Ancroft wind farm will contribute between 16 and 20 MWe of renewable energy to the National Grid, contributing to regional and national renewable energy targets	5.3

				and displacing more resource intensive methods of energy generation.	
<b>iv) Social progress which recognises the needs of everyone</b>					
13	Improve levels of, and provide access to, educational attainment, qualifications and skills in all sections of the community throughout the entire lives of residents.			The construction of the wind farm will directly require a significant local work force, supported by secondary materials and services suppliers.	3.3
				Jobs with E.ON will be advertised in the local area, although limited opportunities will be available at West Ancroft itself. E.ON offers a comprehensive training, development and staff support programme to all employees.	3.3
				E.ON will contribute in the order of £25,000 to local community initiatives each year throughout the lifetime of the wind farm. E.ON also boasts a strong track record for community engagement and volunteering.	6.1
14	Ensure everyone has access to good quality affordable homes that meet their needs.			West Ancroft will not impact upon local access to housing.	n/a
15	Rebalance the population structure of the Borough.			West Ancroft is unlikely to impact upon the local population structure.	n/a
16	Continue to improve Community Safety and reduce Crime and Disorder.			The construction site will be appropriately managed to ensure a high level of public safety.	6.6
				Wind turbines would comply with BS EN 61400-1: Wind turbines, Design Requirements (2005), ensuring the engineering integrity and public safety of the site in operation.	6.4
				The substation at West Ancroft will be secured by a steel palisade security fence surrounding, ensuring public safety and security of the site.	6.4
				E.ON have a strong reputation for public engagement in the safety aspects of energy generation and supply, working particularly with schools and community organisations.	6.4
17	Protect and enhance access to public leisure services and communication infrastructure.			West Ancroft is not expected to impact upon access to public leisure services nor communication infrastructure.	3.2
18	Improve the health and wellbeing of the population, reduce health inequalities and improve accessibility to health and social services.			E.ON operates Health and Safety Management Systems certified to the standard of OHSAS 18001, and sees staff and public health and safety as its number one priority.	6.6
				E.ON staff benefit from a comprehensive package of health and welfare benefits.	6.6

			E.ON actively promotes health and safety initiatives to schools and community groups, and supports a number of sports initiatives, including the FA Cup.	6.6
19	Encourage, support and develop the existing social network of parish councils, development trusts, community, volunteer and support groups.		E.ON will contribute £25,000 to local community initiatives each year throughout the lifetime of the wind farm. E.ON also boasts a strong track record for community engagement and volunteering.	6.1
			E.ON operates a consultation strategy to engage local groups and interested parties in the development and operation of the West Ancroft site. A comment and feedback procedure will be established to encourage ongoing engagement.	6.5
20	Improve working environments and public spaces.		The wind farm will impact upon landscape value in the surrounding area, impacting upon a number of receptors in zones designated for their scenic beauty.	6.2
			Construction of the wind farm will require short-term closure of a number of footpaths and trails in the immediate vicinity of the site. There will be no long term impact on amenity uses.	6.2
			Construction of the wind farm will have short-term impact on existing agricultural activity at the site. There will be limited long term impact on agricultural uses.	4.2
			It is expected that the wind farm will have negligible impact on biodiversity and habitats in the local area. Appropriate management practices are proposed to control potential impacts.	4.4