

WELCOME TO EAST HESLERTON WIND FARM EXHIBITION

Please have a look at the display boards and if you have any questions ask one of our team.

We welcome feedback from you.
Please complete a comments form and tell us your thoughts and suggestions for the project.

Thank you for taking the time to attend.



RWE npower renewables' Little Cheyne Court Wind Farm

ABOUT US

RWE npower renewables is one of the UK's leading wind farm developer and operators.

We operate onshore wind farms which have the capacity to generate over 500 megawatts (MW) of renewable energy.

We have more than 40 renewable power plants throughout the UK and we are a major player in the development of offshore wind farms. In 2004 we built the UK's first offshore wind farm off the coast of North Wales and have just completed a second offshore wind farm, Rhyl Flats.

Company information

RWE npower renewables is the UK subsidiary of RWE Innogy, and sister company to RWE npower.

We are dedicated to generating electricity using sustainable and environmentally friendly resources, and are part of a family of businesses that are developing the natural power of wind, water and biomass, as significant sources of power for the UK's present, and future, electricity needs.

In addition we are supporting the development of emerging energy technologies such as wave and tidal.



RWE npower renewables' Kirkby Moor Wind Farm

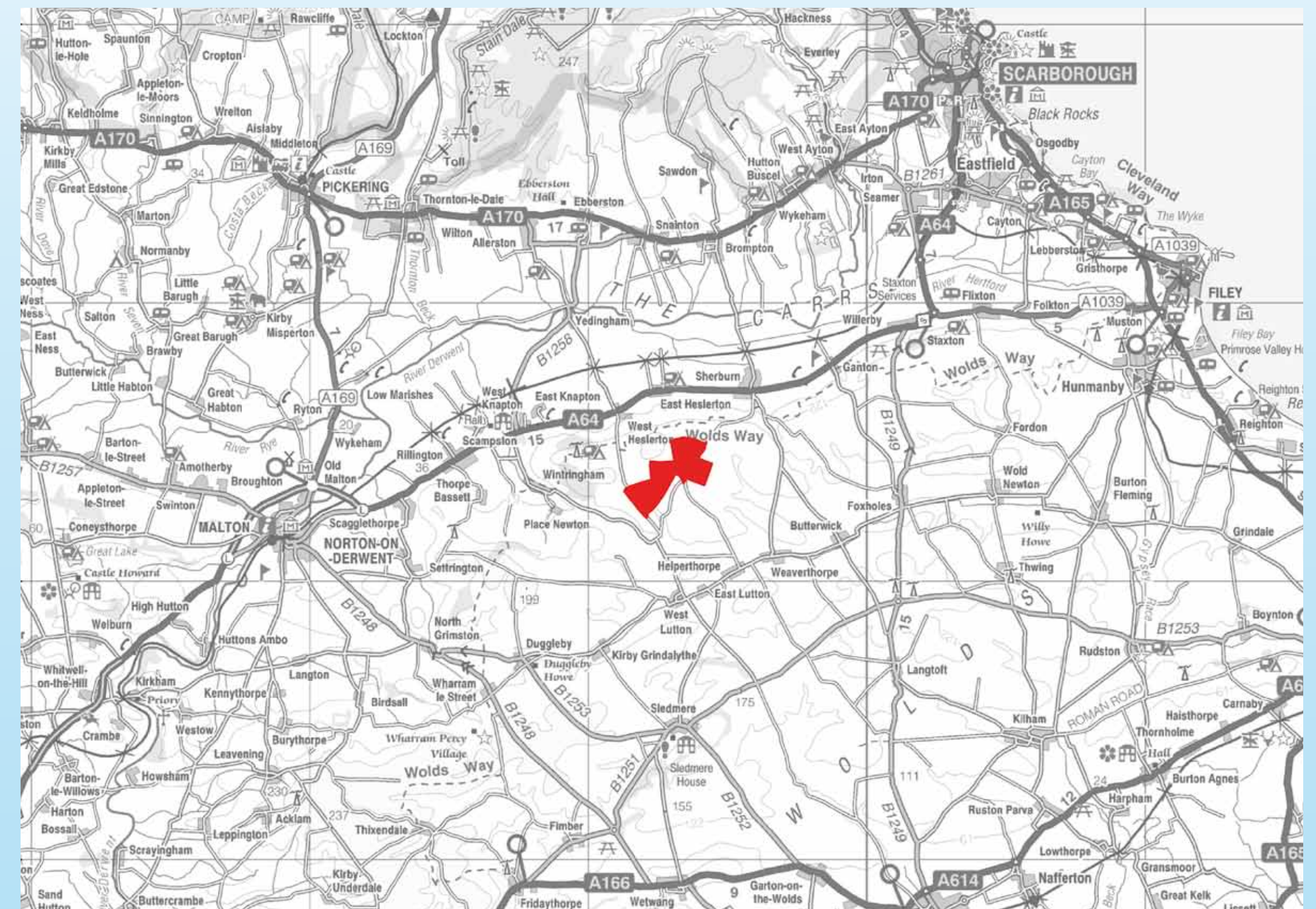
EAST HESLERTON WIND FARM PROJECT OVERVIEW

Number of turbines: up to 10
Capacity of each turbine: up to 3 megawatts
Height of turbines: up to 126 metres to tip of blade
Number of average homes supplied:
approximate domestic needs of around 9,700
average UK households each year

SITE LOCATION

Why has this site been chosen?

- the site is open and benefits from good wind speeds
- there is good access to the national grid
- there is good road access for construction and maintenance.



Site plan/location. Crown copyright 2010. All rights reserved. Ordnance Survey licence number 100018338

Footnotes:

The predicted annual generation at the site has been calculated using a capacity factor derived from performance data for wind farms already operating in England. Should site wind and turbine characteristics result in a similar capacity factor to these operational sites we can expect East Heslerton Wind Farm to generate an amount of electricity equivalent to supplying the approximate domestic needs of around 9700 average UK households each year.

Energy predicted to be generated by the proposal has been calculated using an assumed capacity factor of 26% (DTI Energy Trends UK regional capacity factors 1998-2004), and is based on an installed capacity of 20 MW based on 10 turbines each of rated capacity of 2MW. Note that the current proposed site design could utilise turbines up to 3MW each. The energy capture predicted and hence derived homes equivalent or emissions savings figures may change as site specific information is gathered.

Equivalent homes supplied is based on an annual electricity consumption per home of 4,700 kWh. This figure is supported by recent domestic electricity consumption data available from The Digest of UK Energy Statistics and household estimates and projections from the UK Statistics Authority.

WHAT STAGE IS THE PROJECT AT?

We are progressing with the development of the wind farm and working on the Environmental Impact Assessment (EIA). The EIA is a process by which information about the environmental effects of the wind farm is collected and evaluated.

From this we will produce an Environmental Statement (ES) which we will submit to Ryedale District Council with our planning application. It will provide the local authority with detailed information about the environmental impacts so a decision can be made about whether or not the project should proceed.

Many environmental studies are being undertaken as part of the EIA to ensure we design the wind farm appropriately for the site. A copy of the ES will be available for people to see once it has been produced.

A planning application for an anemometry mast on the site has been approved by Ryedale District Council. This is used to collect wind data including measuring wind speeds and direction.

What happens next?

We are aiming to submit a planning application and Environmental Statement to Ryedale District Council at the end of the year. The planning application and ES will be public documents that can be viewed by everyone.

PROJECT DETAILS

CONSTRUCTION

The precise length of time needed for construction would depend on the final wind farm design as well as site specific ground conditions. However, from experience we believe around six to nine months would be sufficient time to construct a wind farm of this size.

TRANSPORT DURING CONSTRUCTION

Transport studies are being undertaken. From our experience we anticipate turbine components being delivered to the site using specialised articulated low-loader lorries. Other construction materials, such as stone, would be delivered by normal lorries.

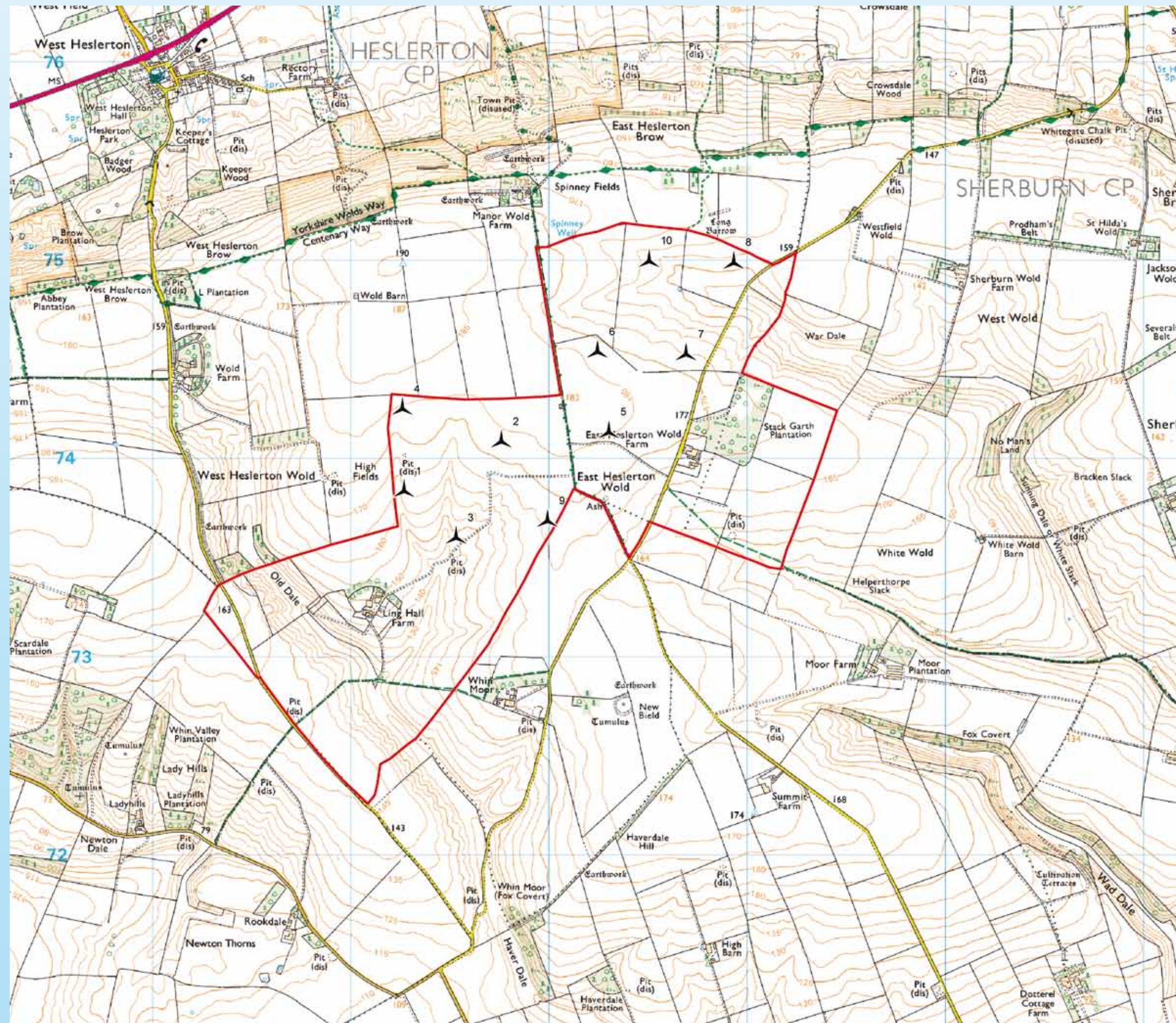
OPERATION

Once constructed, routine inspection and maintenance visits would be required using a light van or similar vehicle. It may be occasionally necessary for larger vehicles to visit the site to carry out specialised maintenance.

DECOMMISSIONING

The normal operational life of a wind farm is 25 years. After this time the turbines will be removed leaving barely a visible trace of the wind farm's previous existence. It would then be up to the next generation to decide whether or not to have a new wind farm on the site, to help continue the fight against climate change.

SITE LAYOUT



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ECOLOGY

SCOPE OF WORK TO BE UNDERTAKEN

Detailed ecological studies are being undertaken to ensure that East Heselton Wind Farm can be designed with a comprehensive understanding of the ecology within and around the site.

These studies will enable the site to be designed to minimise any possible disturbance to wildlife. We are also in consultation with organisations such as Ryedale District Council and English Heritage.

This is to ensure that we collect enough data to assess the potential environmental impacts and design the wind farm accordingly.

The surveys include:

- landscape and visual
- noise and vibration
- ecology and nature conservation
- geology and ground conditions
- archaeology and cultural heritage.

The main results will be included in the Environmental Statement that will form part of our planning application.



RWE npower renewables' Lambrigg Wind Farm

WHY WIND?

Onshore wind farms are, at present, the most commercially and technologically advanced renewable energy technology capable of generating significant quantities of electricity.

CLEAN

Wind power produces no harmful pollutants, no damaging gas emissions that contribute to climate change, no effluent and no radioactive contaminants.

ABUNDANT

With 40% of Europe's total wind resource, Britain is well placed to reap the benefits of the most advanced of all the renewable energy sources.

SECURITY OF SUPPLY

Wind energy is one of the largest indigenous energy resources in Europe and is essential in ensuring Europe gains control of its own energy future.

SUSTAINABLE

Wind farms can provide electricity without any long-term environmental damage and without depleting finite reserves of fossil fuels or uranium.



RWE npower renewables' Lambrigg Wind Farm

CLIMATE CHANGE AND RENEWABLES OBLIGATION

In the UK the effects of climate change could include:

- coastal flooding and erosion from sea-level rise and storm surges
- inland and urban flooding from more heavy rain events
- pressure on water supplies from droughts and increased demand
- detrimental effect on biodiversity.

The adverse and widespread effects of climate change are well documented. One of the major causes of climate change is the emission of large volumes of the greenhouse gas carbon dioxide (CO₂) resulting from, amongst other things, the generation of electricity by burning fossil fuels such as coal and oil.

Currently in the UK 70% of electricity is produced from the burning of fossil fuels.

Using wind power means that fossil fuel power stations need to generate less electricity and therefore burn less fossil fuel. The result is a reduction in harmful gas emissions, thus helping to combat climate change, whilst also helping to preserve limited reserves of fossil fuels.

Renewables Obligation

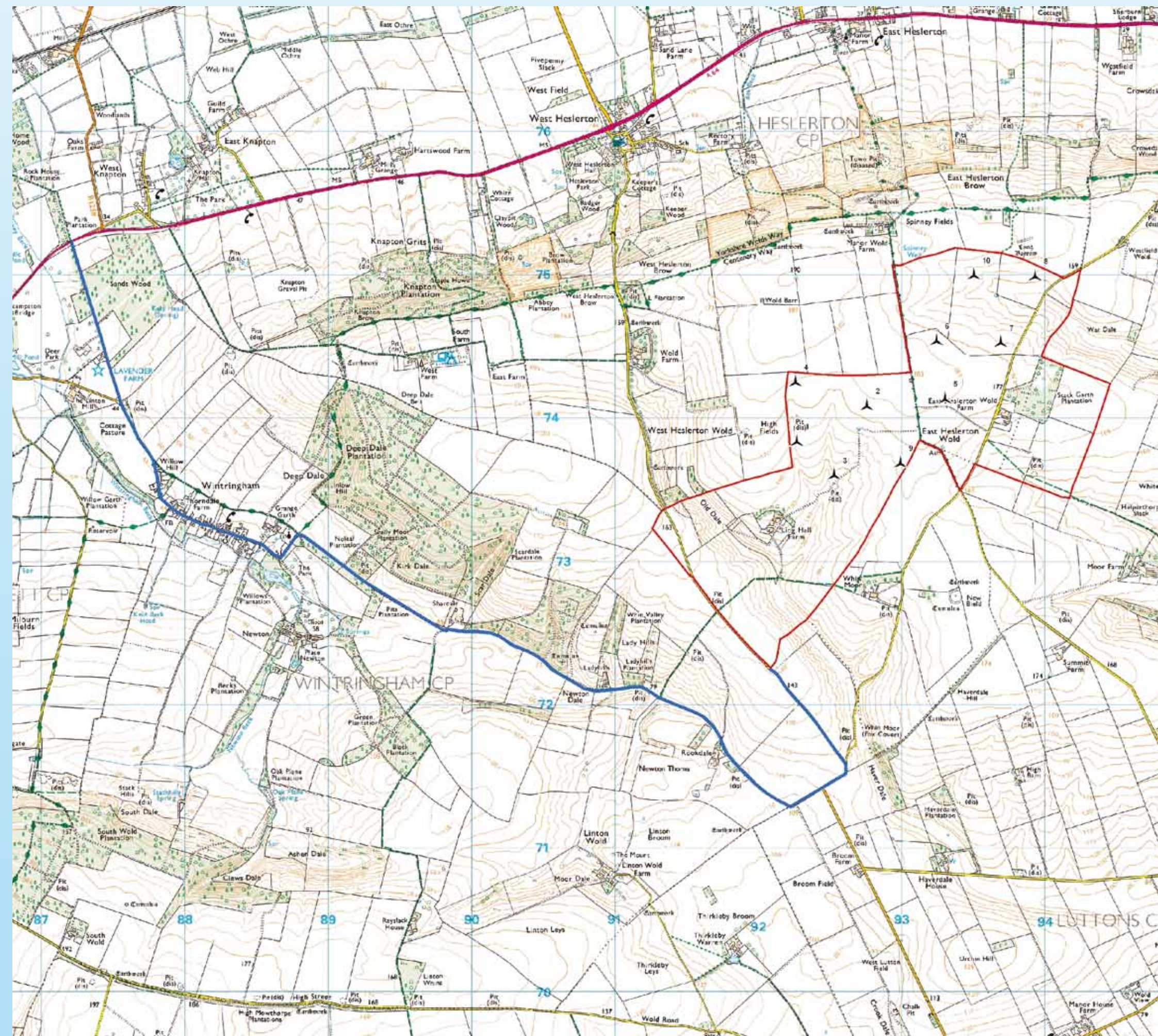
The Renewables Obligation (RO) encourages electricity retailers to provide a proportion of their sales from renewable sources. The UK Government established the Renewables Obligation to provide incentives in renewables and deliver on UK renewables targets.

Large energy companies, such as RWE npower renewables, do not receive direct government subsidies in the form of tax payers' money to develop onshore wind farms.

The RO is a market-based mechanism which requires electricity retailers to purchase an increasing amount of the electricity they sell from renewable sources.

Electricity retail companies pay a premium price for green electricity. However, it should be noted that if such companies fail to purchase a sufficient amount of renewable energy in a given year they are required to 'buy out' their obligation. The RO is the Government's method of breaking the UK out of the conventional energy mix and directing energy companies to bring renewable energy technologies into the mix.

ACCESS ROUTE



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GOVERNMENT POLICY

“The Government believes that climate change is one of the gravest threats we face, and that urgent action at home and abroad is required. We need to use a wide range of levers to cut carbon emissions, decarbonise the economy and support the creation of new green jobs and technologies. We will implement a full programme of measures to fulfil our joint ambitions for a low carbon and eco-friendly economy.

- we will push for the EU to demonstrate leadership in tackling international climate change, including by supporting an increase in the EU emission reduction target to 30% by 2020
- we will seek to increase the target for energy from renewable sources, subject to the advice of the Climate Change Committee.”

Source: “The Coalition: our programme for government” – May 2010



RWE npower renewables' Little Cheyne Court Wind Farm

ENERGY EFFICIENCY

WHAT ELSE CAN BE DONE TO LIMIT CLIMATE CHANGE?

Whilst the method of generating electricity is important in helping slow the rate of climate change, equal importance must be given to how we all use electricity in our everyday lives. We can make a valuable contribution by being more 'energy efficient' in our homes, schools and workplaces.

Here are some ideas

- turn off lights and appliances when they're not in use
- walk or cycle to work or the shops instead of taking the car
- save water by fixing dripping taps
- take the train or bus or lift share when you can
- switch to a green electricity tariff and support the use of renewable energy
- recycle and minimise your waste.

OFFSHORE WIND ENERGY

Since offshore wind development began in the UK, RWE npower renewables has been leading the way. The company's North Hoyle Wind Farm – completed in 2004 – was the UK's first major offshore wind farm.

In December 2009, our 90 megawatt Rhyl Flats Wind Farm became fully operational. And Gwynt y Mor Offshore Wind Farm is now being developed with partners Stadwerke Munchen and Siemens.

RWE npower renewables is a fifty percent partner with SSE in Greater Gabbard Offshore Wind Farm where the first turbine was installed in May 2010. Also with SSE, we are developing Galloper Offshore Wind Farm.

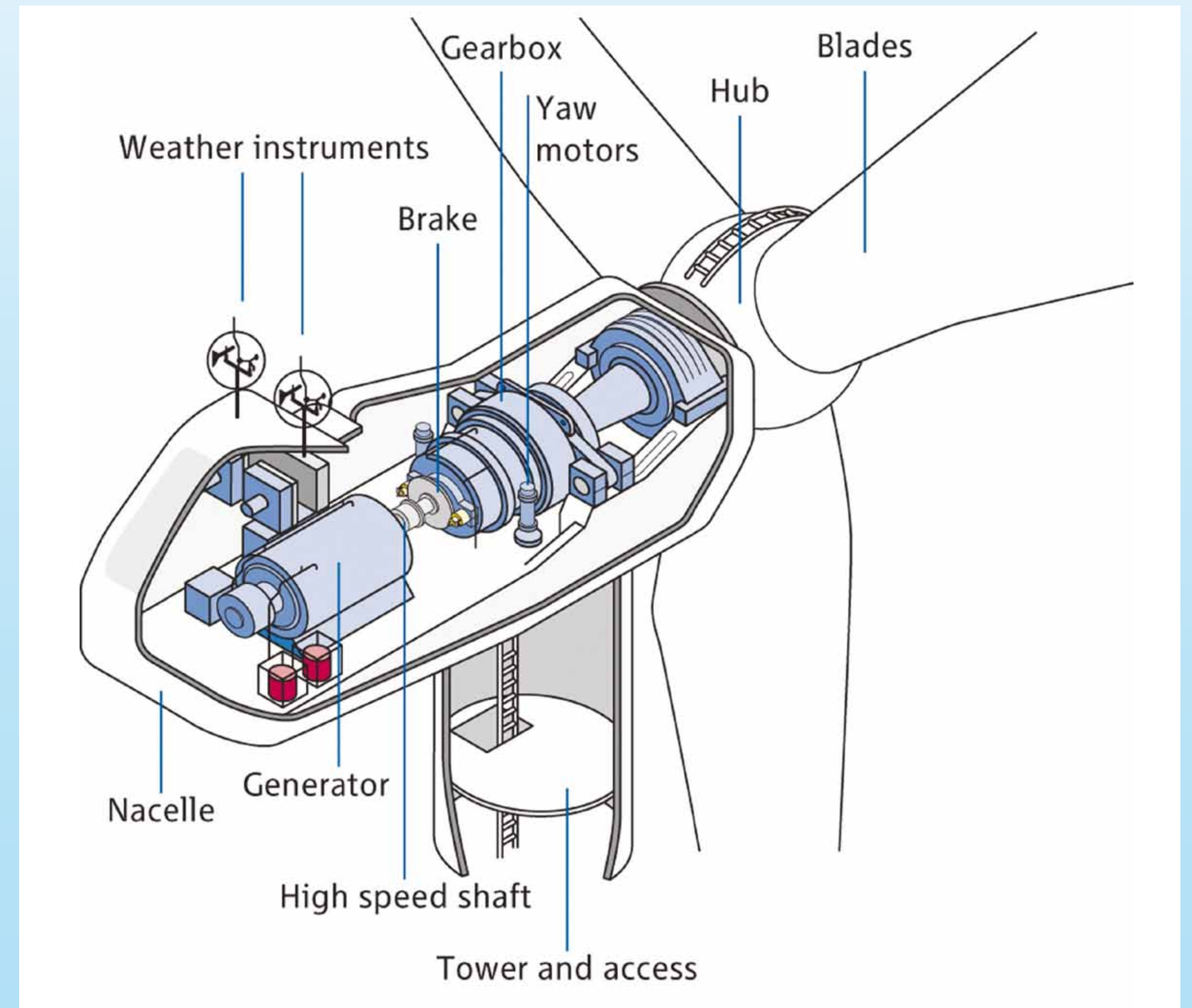
Triton Knoll and Atlantic Array are under development and we are a partner in the consortium which is developing the offshore Dogger Bank zone (with a target capacity of 9 gigawatts).



RWE npower renewables' Rhyl Flats Offshore Wind Farm, North Wales

WIND TURBINE TECHNOLOGY

This image shows the mechanisms of a typical wind turbine.



PUBLIC OPINION

A GRACEFUL MARVEL IN MABLETHORPE

“We love the turbines at Mablethorpe. We cannot hear any noise. They’re not at all ugly; in fact we think they’re graceful. They break up the flat landscape and look lovely against the sunset.”

Mr and Mrs Rollinson nearest uninvolved neighbours to Bambers Farm Wind Farm.

SILENT WORKHORSES OF ARDROSSAN

“The Ardrossan wind farm has been overwhelmingly accepted by local people – instead of spoiling the landscape we believe it has been enhanced. The turbines are impressive looking, bringing a calming effect to the town, and contrary to the belief that they would be noisy, we have found them to be silent workhorses.”

Councillor Margaret Nunn



Meeting local people at RWE npower renewables' Little Cheyne Court Wind Farm

COMMUNITY BENEFIT PACKAGES

RWE npower renewables offers a range of community benefits at our operating wind farms. These are designed to benefit those communities living closest to the site.

There are a number of existing community benefit models which have been negotiated locally to meet the specific needs of individual areas. The model varies depending on the size, type and geographical make up of local communities.

These benefits have been used to fund a variety of activities including;

- refurbishing community buildings
- environmental education programmes
- energy efficiency schemes
- support for local groups and organisations.

Community benefit packages are additional, voluntary benefits that we choose to offer. They are not a material consideration of any planning application.

HOW COMMUNITY BENEFIT PACKAGES CAN MAKE A DIFFERENCE

CARNO WIND FARM

Carno First Responder volunteers provide vital life saving treatment within the first minutes of an emergency before the emergency services arrive. In 2007 a £2,000 grant from the Carno Wind Farm Community Fund helped the group to purchase a life saving defibrillator and oxygen set, protective clothing for volunteers and training equipment.

Carno First Responders said

“The grant from the Wind Farm Community Fund has been invaluable in helping us purchase the equipment we need to carry out our work. It will be with us whenever needed and could help us to save lives in our community.”



Carno First Aid Responders Team

HOW COMMUNITY BENEFIT PACKAGES CAN MAKE A DIFFERENCE

LITTLE CHEYNE COURT WIND FARM

Following a public inquiry, legal costs paid to RWE npower renewables were made available to support local community projects. All primary schools in the area were offered a renewable energy education day and grants were awarded to community projects near the wind farm.

One of these community projects was the Lydd Allotments Association which was granted £11,000. This money paid for security fencing and gates, equipment including a tractor which is used to prepare previously untended plots and wire netting to rabbit proof the fencing.

The allotments not only benefit allotment holders but other people using the site, including a Junior Gardening Club and local residential home.

“A neglected eyesore is now pleasant and flourishing. Produce is shared with others in the community.”

Sylvia Ollier
Vice Chair Allotments Society



Lydd allotments

QUESTIONS AND ANSWERS 1

Any wind farm proposal can raise a lot of questions. We have listed some of the more frequently asked questions and answers below.

Will there be hundreds of wind farms all over the countryside?

We cannot build wind farms just anywhere. Sites must have good wind speeds, be suitable distances from homes and have an available connection to the local electricity network. Where a suitable site is identified, we now use powerful modern wind turbines to achieve maximum generation. The more electricity it generates, the better a wind farm is for the environment.

Are wind turbines noisy?

Modern wind turbines are quiet in operation and you can hold a conversation underneath one without having to raise your voice. The final design of the wind farm will ensure that strict guidelines relating to noise are complied with. If you have concerns, the best thing to do is visit one for yourself.

Do wind turbines harm birds or wildlife?

The RSPB states that climate change is the biggest issue facing wildlife and humanity this century. In its recent report 'Positive Planning for Onshore Wind' the RSPB showed it is possible to develop onshore wind farms, without damage to wildlife. (March 2009)

Does it take more energy to make a wind turbine than it generates?

Once operational, the average wind farm in the UK will pay back the energy used in its manufacture and installation (including the production of the concrete in the foundation) within six to nine months.¹

QUESTIONS AND ANSWERS 2

Any wind farm proposal can raise a lot of questions. We have listed some of the more frequently asked questions and answers below.

What happens to turbines at the end of their life?

At the end of a wind farm's life of 25 years, the wind turbines and associated equipment are removed, leaving barely a visible trace of its previous existence.

Will wind energy increase my power bills?

Depleting fossil fuel supplies mean that gas and electric bills are set to rise in the future. However, according to the Sustainable Development Commission, onshore wind is projected to become the cheapest source of electricity by 2020. This is due to sustained reductions in costs for wind power plant combined with increased costs for fossil fuels, particularly coal and gas.

How reliable are wind farms?

From our own experience, a modern wind turbine produces electricity 70-85% of the time. The amount of energy produced is of course dependent on the speed of the wind. This has already been taken into account in all of the figures produced regarding the proposed East Heselton Wind Farm.

When wind is not blowing sufficiently for energy to be produced, the grid will back up the supply, just as a gas or coal fired power station needs back up when it is not operational. The grid system is already designed and operated to accommodate unpredictable variations in demand and the instantaneous loss of large generators.