

# Meeting Devon's Renewable Energy Targets

A proposal for a wind farm at Fullabrook Down

## The proposal

An application is to be submitted to the Department of Trade and Industry by Devon Wind Power for permission for a 20-turbine wind farm at Fullabrook Down, south of Ilfracombe. Each turbine will have an output of 3MW giving a total capacity of 60MW, almost two-thirds of Devon's 2010 wind energy requirement - sufficient to supply 56,000 homes.

Each turbine will be 65m high from ground to hub and will be equipped with three 45m blades. It is estimated that when the wind farm is fully operational it will reduce emissions from conventional power stations, saving the discharge of 185,000 tonnes of carbon dioxide annually, as well as hundreds of tonnes of sulphur dioxide, nitrous oxide, carbon monoxide and other pollutants.

The turbines will be connected to the National Grid north of Barnstaple.

## The need

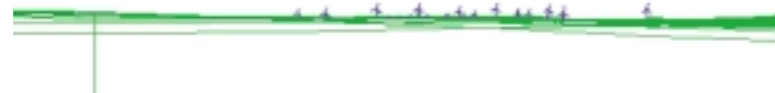
As part of its commitment to combat global warming and the rising sea levels that threaten parts of North Devon's coastline, and the dwindling national production of oil, gas and coal, the Government last year published a new national energy strategy. This set a target of 10% of the country's energy requirements being met from renewable sources by 2010, rising to 15% in 2015. It is 3% at present.

Revision 2010, a report commissioned by the Government Office for the South West, recommends that in Devon on-shore wind power provides 103MW of electricity by 2010, just over two-thirds of the county's target from all renewable sources.

This proposal, if approved, would go a long way towards meeting that wind power target.



View from Dean Lane



View from Berrydown



View from Saunton Down

## The other options

Although there are a number of alternative renewable energy sources under development none are immediately available to meet the government targets, as will be seen from the table summarising the other main options.

### Renewable energy source

### Reasons for non-availability

Offshore wind power	High cost, need for shallow waters
Biomass	Still at development stage
Wave/tidal power	Still at development stage
Barrage (eg Severn or Torridge)	Huge cost, long lead time
Solar	Insufficient sunshine in UK to avoid need for other renewable resources
Photovoltaic	Still at development stage
Nuclear	Huge cost and enduring concerns over environmental and long term risk

## Visibility

Although the turbines are sited on high ground, they are in a sparsely populated area and the intervening topography would screen them from the populated low lying coastal areas and beaches, and narrow valleys nearer the site, as the adjacent map shows.

We have also produced computer-generated plans which show the visual impact of the proposed wind farm from various view points in the area - some of the main ones are shown here.

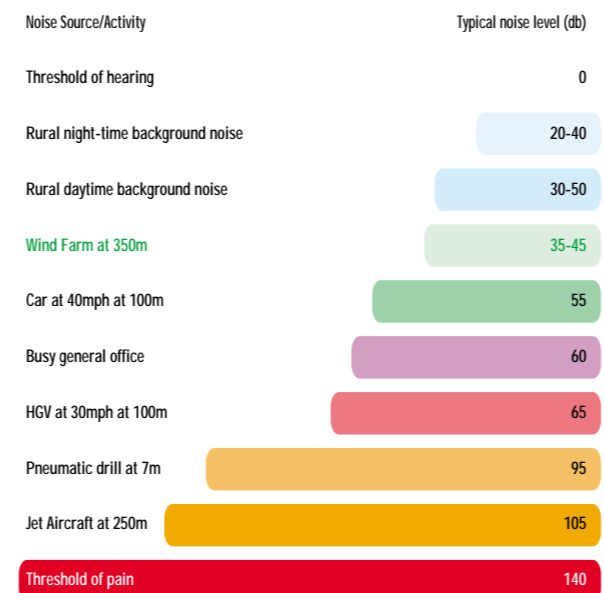
## Noise

In recent years a considerable amount of development work has been directed to minimising the noise from wind turbines - both the mechanical noise from the hub and from the movement of the blades through the air. The larger turbines now being made have longer but lighter blades, which rotate at 19 rpm, half the speed of earlier models, and yet deliver more energy.

The noise level from a wind turbine is low and can be compared with everyday sounds such as a babbling brook or rustling leaves as can be seen from the table. Standing underneath one while it is operating, you can hold a normal conversation without raising your voice.

As the wind speed increases the noise of the wind itself increases shutting out the background noise from the turbines.

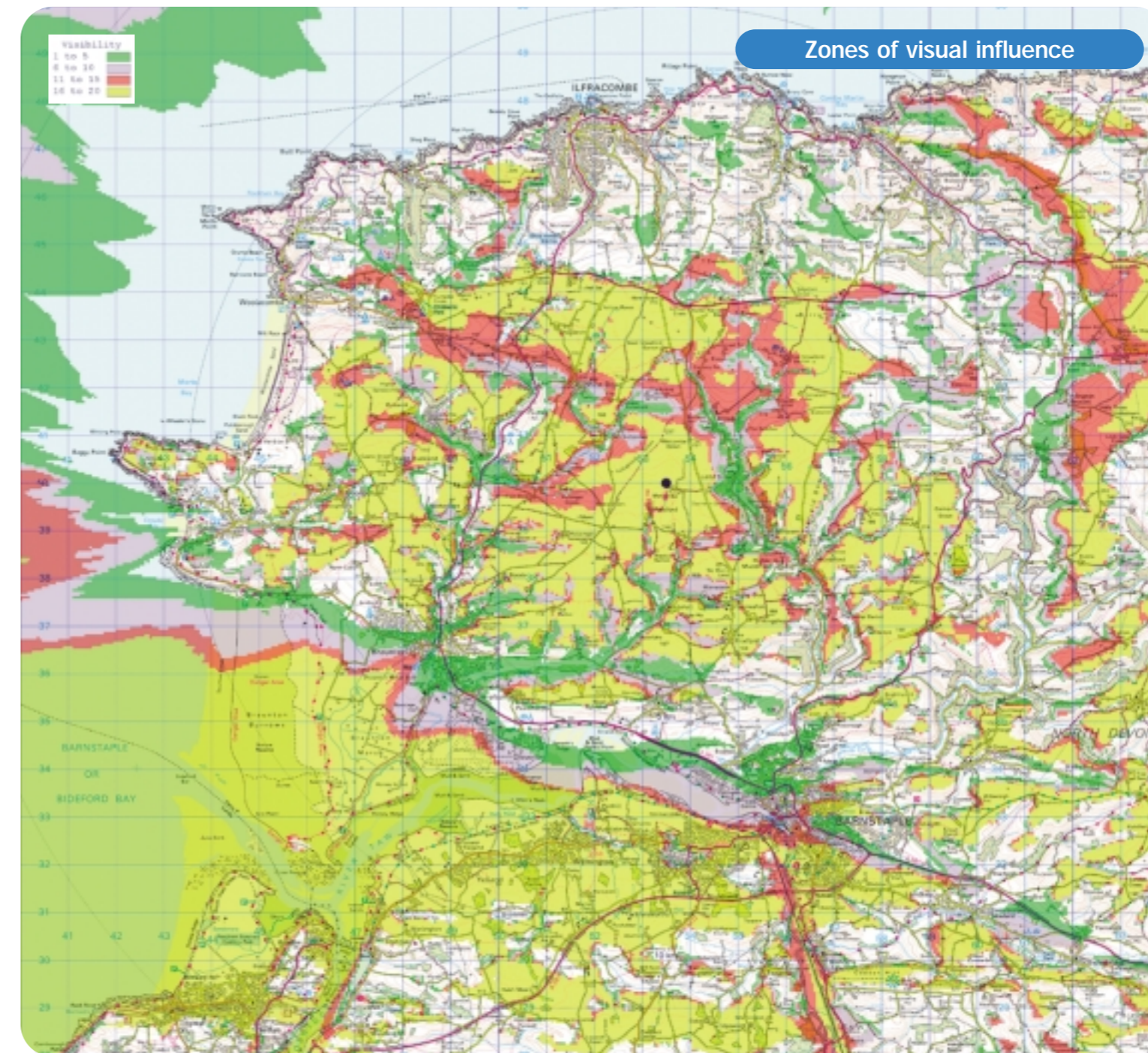
Regulations have also been brought in which effectively have increased the minimum distance between the turbines and the nearest dwellings. A maximum noise level of 40db has been set. Noise suppression units can be fitted to individual turbines which limit their operation at sensitive wind speeds or directions.



## The choice of Fullabrook

Fullabrook is within the Devon County Structure plan's area of search for wind farm developments, which excludes areas covered by landscape protection policies.

Fullabrook also has some of the most consistently high wind speeds in Devon. It has none of the constraints of other areas, such as protected landscape, radar signal and microwave link interference, protected habitats and proximity to large concentrations of houses. It is also large enough to meet a significant proportion of Devon's renewable energy requirements.



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## Community benefit

In common with other wind farm proposals across the UK, provision will be made in the planning application for some form of community benefit for those most affected by the proposal. In other cases this has taken the form of the establishment of a community fund, support for local schools and other organisations, the provision of cheaper electricity or grants towards insulation, double glazing and other energy conservation measures. We shall be seeking views on this during our consultation process to ensure that any package of benefits that can be provided is tailored as closely as possible to the local community's needs.

# Questionnaire

Please cut out this questionnaire and return it to Devon Wind Power, Baring House, 6 Baring Crescent, Exeter, Devon EX1 1TL

1 Are you in favour of the use of wind as a clean energy source?  
 Yes  No

2 What do think are the main benefits of using wind to generate energy?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

3 What do you think are the main drawbacks?  
 \_\_\_\_\_  
 \_\_\_\_\_

4 Do you think this is a good location for a wind farm?  
 Yes  No

5 What form should any community benefit take? (please tick)

- i) Community fund administered locally
- ii) Grants for energy conservation - eg insulation & double glazing
- iii) Cheaper electricity for those in immediate vicinity
- iv) Other (please write in) \_\_\_\_\_

General Comments  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Name (optional) \_\_\_\_\_

Address (optional) \_\_\_\_\_  
 \_\_\_\_\_

Postcode \_\_\_\_\_

Telephone (optional) \_\_\_\_\_

You do not need to give your name and address. However your post code will enable us to analyse the response more effectively. If you would like to discuss any aspect of the scheme or the potential community benefit package further then please supply a contact address, phone number or e-mail address.