

# ENVIRONMENTAL STATEMENT

Information in support of Planning Application

By

Weston Park Farms

Weston

## Wind Turbine Power Generation Scheme

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March 2008

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# 1. INTRODUCTION

This Environmental Statement (ES) comprises the Environmental Impact Assessment (EIA) pertaining to a planning application for the proposed erection of three wind turbines and a wind speed monitoring mast at Weston Park Farms, Weston.

Under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, an installation for the harnessing of wind power for energy production is a Schedule 2 development where the threshold criteria for the carrying out of an EIA includes "installations of 2 or more turbines; or where the hub height of any turbine.....exceeds 15 metres". Government Circular 2/99: Environmental Impact Assessment, states that "EIA is more likely to be required for commercial developments of 5 or more turbines, or more than 5 MW of new generating capacity. The decision to submit an Environmental Statement is based on the scale of the total wind turbine capacity of 6 MWe and on the number of turbines (3 no) proposed.

The scope of the ES covers the areas where potential environmental impacts may occur as a result of the development proposed which is described in the planning application.

Weston Park Farms are seeking permission to generate electricity at their land at Weston Hills, Baldock. The intention is to install three 2 MWe wind turbines on agricultural land.

The motivation is to generate electricity for the local economy and improve the environmental credentials of the farming business.

The location is an agricultural area at the southern edge of Baldock near the village of Weston.

Although there are several ecologically sensitive areas nearby, the proposed wind turbines do not create a significant impact.

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## 2. NON-TECHNICAL SUMMARY

Weston Park Farms are seeking planning permission for the installation of three 2 MWe wind to generate electricity for the local economy and improve the environmental credentials of the farming business. The scheme will offset carbon emissions by an estimated 15,300 tonnes per year or 382,500 tonnes over the life of the turbines.

The three wind turbines will have rotor blades of 40m diameter and a hub height of 80m.

This non-technical summary considers, in a simplified form, the potential impacts on the environment and local amenities arising from the scheme. It sets out the main points from the Environmental Statement.

Weston Park Farms have a strong commitment to the environment and already have an ongoing program of activities to protect and conserve the local environment.

Wind turbines are temporary structures with a life-span of about 25 years.

The Environmental Statement supporting the planning application deals with several potential impacts of the scheme in depth. These are summarised below, with a table showing the magnitude and significance of the impacts at the end.

### Noise

The site is not close to housing and the noise produced by the wind turbines is reduced with distance from the turbines. The nearest housing will have a worst case contribution 35 dBA, at distance of 620m.

The predicted noise levels generated by the turbines have been shown to be well within noise limits derived from the measured background noise levels using guidelines provided by ETSU-R-97. The noise impact of the proposed development would not be expected to be significant.

### Ecology

The Weston Park Farms site includes several habitats which could support protected species and is home to many species of birds that could be affected by the introduction of the large moving equipment of the wind turbines.

A series of ecological surveys have been carried out:

Desktop Survey to review records of general ecological activity. This was used to guide the detailed surveys.

Habitat Survey to examine the habitats in detail.

Breeding Bird Survey to record activity and seek out protected or endangered species. Lapwing and common buzzard are the only species recorded that are of conservation interest and are also at risk from collision with turbines. Impact to both of these species is thought to be negligible based on the population size (both one pair) of these two species at the site. All clearance works should be timed, where possible, to avoid the bird nesting season. There is unlikely to be any significant impact to bird species from the proposed wind turbines if the recommendations are followed.

Bat Survey to locate maternal roosts and identify movement and forage areas. Bat activity in the area is low. Bats are more likely to use the ancient woodland, the old buildings in the village of Weston and more suitable grassland habitats in between these areas, rather than intensively managed arable fields. The proximity of the site to the flight paths of two major airports (Luton and Stansted) and a major road just to the north may have some impact on reducing bat activity in the area through light and noise pollution.

Reptile Survey to identify reptile activity. Great Crested Newts were found nearby. Given the estimated low population, distance from the wind farm, lack of suitable terrestrial habitat around the turbines and the presence of suitable terrestrial habitat around the pond; it seems highly unlikely that Great Crested Newt would use the wind farm site.

Badgers Survey to find signs of badgers were seen adjacent to the site. Badgers are highly mobile and so prior to construction it is recommended that a survey is undertaken up to 50m from new infrastructure to confirm the presence/absence of active badger setts.

Plant Species Surveys There were no invasive, rare or scarce plant species recorded.

In each instance the assessment of ecological impacts has confirmed the magnitude to be low and the significance to be minor or less.

## Landscape and Visual Impact

These impacts have been evaluated using the 'North Hertfordshire and Stevenage Landscape Character Assessment', and 'Hertfordshire Renewable Energy Study'. These studies have been used to identify the landscape capacity for absorbing these wind turbines.

The wind turbines are prominent but a medium scale open landscape such as is found in the Green End Plateau area can absorb a small scale wind project of three wind turbines, especially as there are only three closely set turbines.

Nevertheless, the wind turbines are visible over a wide area, by virtue of their size. The report contains representations of the zone of theoretical visibility. The theoretical impact of the worst case is also reduced by a consideration of regular interruptions to free viewing by inclement weather and diurnally, by nightfall.

Photomontages are used to demonstrate the visual impact on people living or moving near to the turbines. In a small number of views close to residential receptors, around 1km there is potential for major significance. The closer the turbine the greater the visual impact and the further the turbine the lesser the impact. At around 5 to 6km the turbines diminish significantly even on a clear day, to be of minor significance.

The Hertfordshire Renewable Energy Study, addresses the options for Hertfordshire in relation to renewable energy production for electricity, for heat and for transport. The Weston Park Farms wind turbine development proposal is within an area identified by the study as one of the key wind power generation resources of the county.

The degree of significance regarding this turbine site and visual impact is also dependent upon individual's sympathies and specific sensitive viewpoints.

Overall this wind turbine proposal is of moderate significance in terms of landscape and visual impact.

## Shadow Flicker

There is one house which shadow flicker may affect when the sun is low in the sky, ie mornings, evenings, or mid-winter. Should shadow flicker be a clearly identifiable problem for residents in this or any other locations, Weston Park Farms will alter the operating period of the offending turbines to prevent shadow flicker on the properties concerned.

## Archaeology

Archaeology issues have been discussed with the English Heritage. It is considered that the amount of ground disturbance that will be caused by the wind turbine erection will be small and that it would be appropriate to carry out supervision of the excavations for the turbine foundations, as opposed to prior investigative excavations. The possibility of destroying artefacts has a low magnitude and the significance is minor adverse.

### Air and Water

There are no emissions to air and the only risk of liquid escape is from maintenance chemicals and oils. These will be managed within the existing systems in place at Weston Park Farms for similar materials.

### EM Signals

Investigations with OFFCOM and follow-up with adjacent link operators has confirmed that there are no conflicts with microwave link operators.

### TV Signals

The BBC Windfarm tool was used to assess possible reception difficulties for householders in the area. The BBC calculates that each turbine may affect 2949 homes, 3487 homes and 4165 homes, although many homes are repeated for each turbine. There is an alternative for all of these homes and all television reception difficulties caused by the erection of wind turbines must be rectified at the cost of the developer.

### Transport

The Weston Park Farms site is a country location with final access along small lanes. The main road infrastructure, the A1 and the A505, is 2 km away with good dual carriageway roads to within 2 km of the site.

The total number of vehicle movements associated with the wind turbines is also low in number. The delivery of large items of plant for construction will be arranged in conjunction with the Police and Highways Agency.

### Other Consultees

The MoD and CAA have no objections.

### Construction

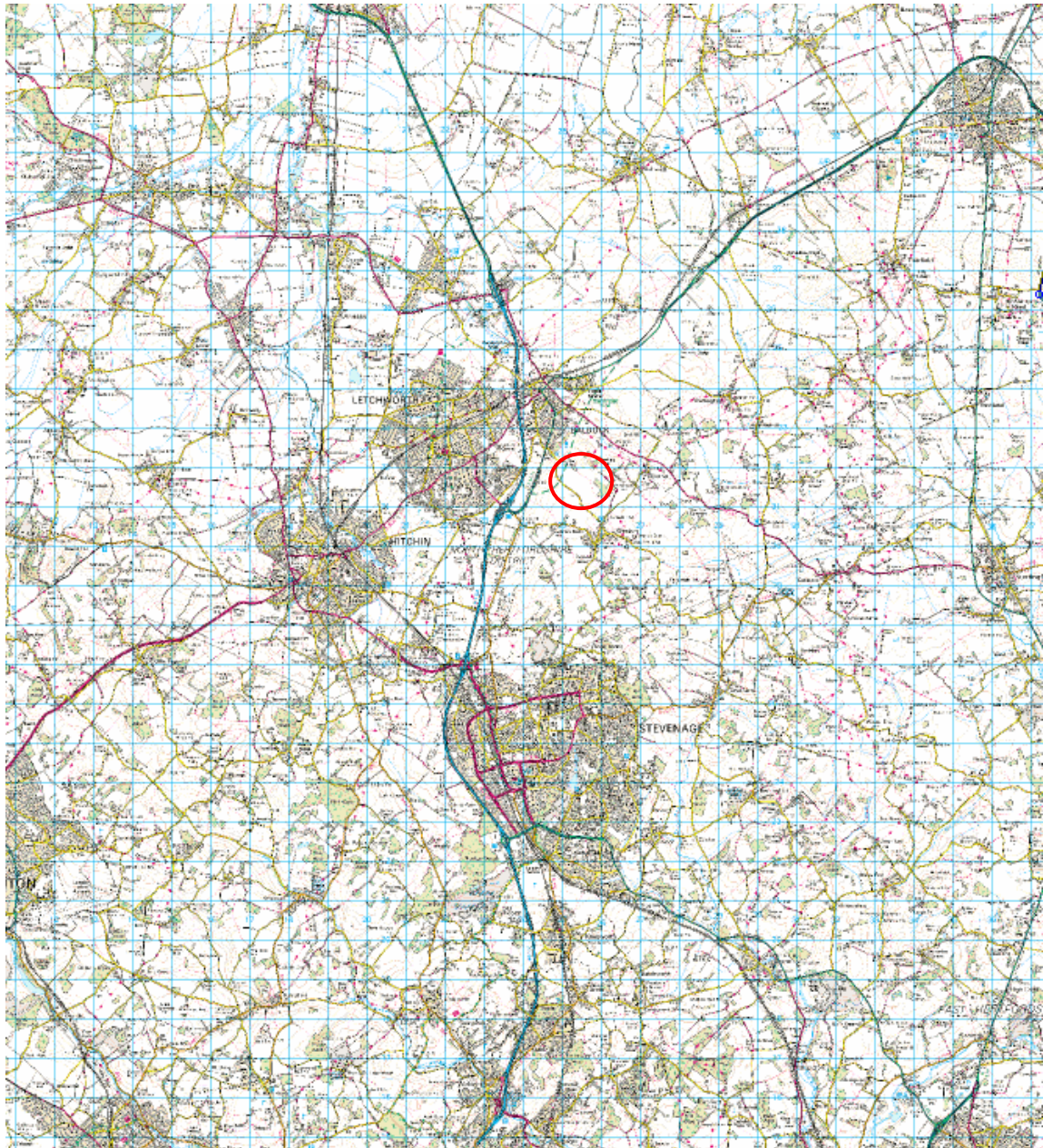
Construction impacts will be low because the period of site operations is about 3 months, with two peaks of activity for the turbine bases to be constructed, and then the erection of the turbines. The potential for adverse ecological impacts has been discussed in the ecology section.

In summary the areas of potential impact are listed below

	<b>Magnitude</b>	<b>Significance</b>
Socio-economic	High	Major beneficial
Noise	Low	Minor adverse
Ecology	Low	Minor adverse
Landscape and Visual Impact	Minor-Moderate	Moderate
Archaeology	Low	Minor adverse
Air and water	Nil	No change
Transport	Negligible	No change
Aviation	Low	No change
Construction	Low	No change
EM Signals	Low	Minor Adverse

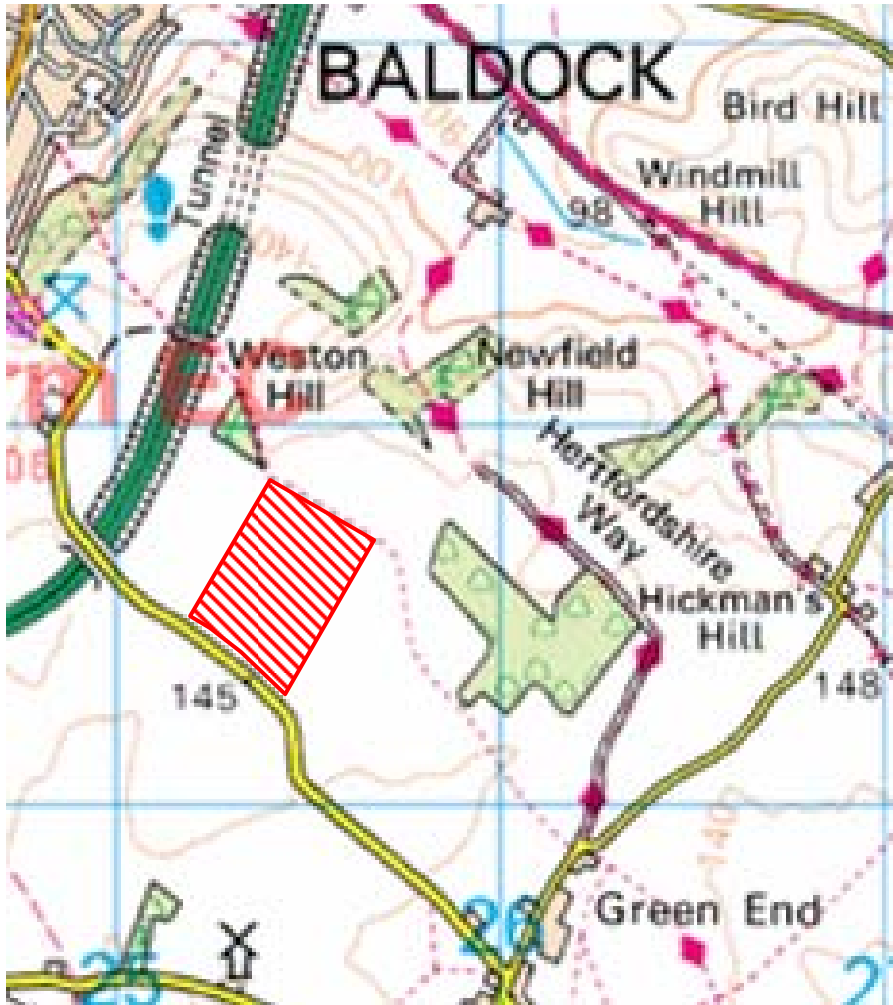
### 3. LOCATION

The location of the Weston Park Farms site is shown on the Ordnance Survey map extracts in Figure 1 and Figure 2 below.



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**Figure 1 General Location**



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**Figure 2 Close Location**

The detail layout is shown in Figure 3 and the red-line drawing in Figure 67 shows the extent of land ownership by Weston Park Farms edged blue and the area affected by this development, edged red.

This includes the base area around each turbine, the electrical connection housing, the long-term access roadways and the route for electrical connection to the substation.

The laydown areas are also shown.



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### **Figure 3 Detail layout Diagram**

The wind turbine National Grid reference positions of the three wind turbines are as follows

1. TL 25502 31350
2. TL 25247 31530
3. TL 25565 31658

These wind turbine positions are indicated at various points in the text and figures of this document. The positions above are definitive.