

# **NON-TECHNICAL SUMMARY**

**For**

## **Environmental Statement**

**Wind Turbine Power Generation Scheme**

**Weston Park Farms**

**Weston**

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.

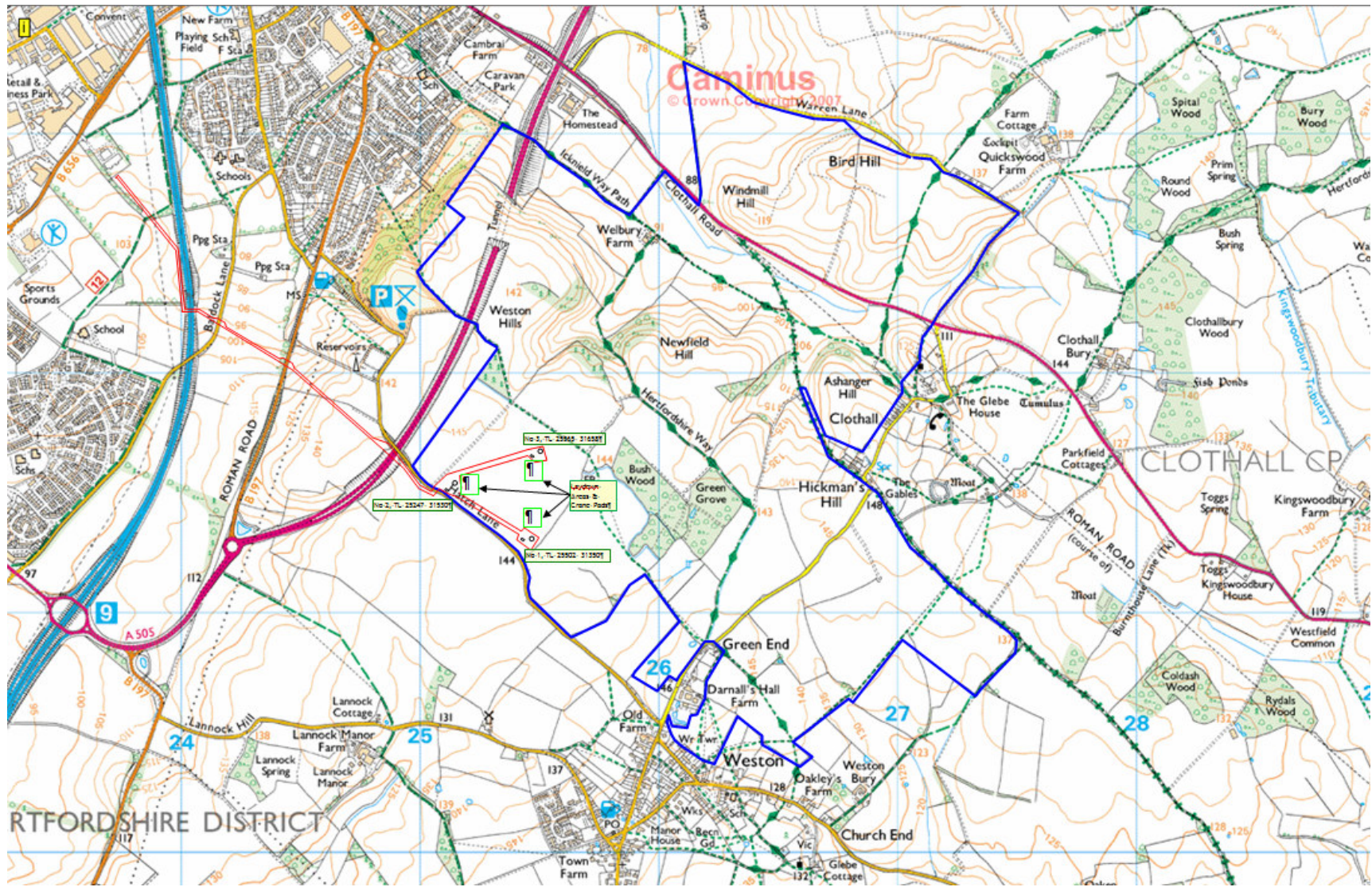
Weston Park Farms have a strong commitment to the environment and already have an ongoing program of activities to protect and conserve the local environment.

Wind turbines are temporary structures with a working life of 25 years, after which they would be decommissioned and dismantled.

The location of the three wind turbines is shown on the next page.

The planning application is subject to Environmental Impact Assessment processes in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.

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.



## The Need for Renewable Energy

It is internationally acknowledged that the global climate is warming and that increases in the levels of greenhouse gases in the earth's atmosphere, such as carbon dioxide (CO<sub>2</sub>), are a major contributor to climate change. In the past 50 years, most of the increase in greenhouse gas emissions has been due to human activity. According to the Department of Trade and Industry, the United Kingdom (UK) is currently responsible for three per cent of global greenhouse gas emissions even though it has only 1 per cent of the world's population, with power stations providing over a third of the CO<sub>2</sub> produced by the UK.

This is the background that has moved the UK Government to encourage renewable energy power generation.

This scheme will displace some 15,300 tonnes of Carbon Dioxide greenhouse gas emissions per year.

The 19,000 MWh of electricity produced will be capable of providing the needs of 3300 homes. This is a significant proportion of the 4 -5,000 homes in Baldock.

## The Wind Turbines

The wind turbines that the project has been based on are Vestas V80 machines. These have 80m diameter blades mounted on a tower that is 80m high to the nacelle which houses the gearbox and generation equipment.

A wind speed monitoring mast will be erected for an initial period whilst wind turbulence data is collated to assist in finalising design details.

Each turbine will be connected by an underground cable to a small substation. Access tracks of 5m width connect each turbine with the access point on Hatch Lane.

## Public Consultation

Members of the public have been consulted at three levels.

- Two public meetings have been held in Weston Village Hall. Neither elicited significant opposition to the scheme.
- The Weston Parish Council have been provided with advance copies of the Environmental Statement and they have carried out a review of wind turbine interactions with other communities. Their report has been submitted to North Hertfordshire District Council. This report does not conclude against the project.

- Prior to and after the first public meeting the scheme was the subject of significant press attention with many articles in the local newspapers. At no point has this publicity resulted in any identifiable negative public reaction to the project.

## Environmental Impacts

### 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. There is significant visual clutter created by the nearby National Grid pylons which diminished the wind turbine impacts for many views.

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 will 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 adverse
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

## Conclusions

It is concluded that there are no unacceptable residual impacts resulting from this scheme.