Longhirst Wind Farm Proposal

October 2008 - Environmental Update

Novera Energy is progressing proposals to submit a planning application for a Wind Farm at Longhirst which lies on farmland between the villages of Longhirst and Hebron, some 2km north-west of Pegswood.

Environmental studies have been continuing over the summer and autumn to feed into the final design of the wind farm and support the forthcoming planning application. Novera were aiming to submit a planning application in December 2008, but due to the length of time required to complete some of the studies, Novera now expects to submit an application in 2009. Further updates on this timescale will be provided when available.

This environmental update has been prepared in order to inform you of the progress of these studies to date. **The fixed and final layout for the wind farm has yet to be determined.**

Environmental Studies
A comprehensive range of environmental studies will be carried out in order to inform the wind farm design process. These include:-

• Landscape and Visual • Ecology • Ornithology • Hydrology and Hydrogeology • Cultural Heritage and Archaeology • Noise • Telecommunications and Television Reception • Shadow Flicker • Transport and Access • Socio-economics • Aviation and Radar

An Environmental Statement (ES) will accompany the planning application for the wind farm, which will be submitted to Castle Morpeth Borough Council. The ES will detail all of the environmental surveys and assessments undertaken and will be available to the public following submission of the planning application

Ornithology
We have been carrying out bird surveys at the site since October 2007, which have included walkover surveys and vantage point surveys over the summer and winter periods. Several species of bird have been identified as using the site, including farmland birds such as yellowhammer, reed bunting, linnet, skylark and other species, such as lapwing and curlew. A medium sized flock of golden plover was also regularly seen feeding and roosting at specific locations throughout the duration of winter surveys. A few skeins of geese have been recorded, flying well above the site, whilst raptor species such as kestrel, buzzard and sparrowhawk have also been sighted. The number and variety of bird species on the site is what would commonly be expected for on mixed use lowland farm land.

During the winter months several species of waterfowl, including tufted duck, mallard and mute swan, have been recorded within the study area. All waterfowl appear to breed outside of the site.

By observing the flight paths of the different bird species it has been noted that only a small number of birds actually use the airspace above the proposed turbine development. The design phase of the wind farm will take into account where the birds are using the site and will avoid siting turbines in any well used parts of the site. In addition, a full collision risk assessment will be carried out as part of the ES.

Construction of the wind farm would be timed to minimise any displacement of breeding birds that may use the site.

Ecology
The site comprises pasture and arable fields with pockets of woodland, scrub and areas of marshy grassland. The site holds no habitats of any conservation importance. Areas of woodland adjacent to the site have low ecological value as they tend to be densely packed immature conifer plantations or immature mixed woodland.

As part of our ecological assessment we have surveyed for signs of badger, otter, water vole, great crested newts and bats.

There is a small amount of badger activity on the site suggesting they use the site for foraging (feeding), but no signs of water voles have been found. The available habitat on and around the wind farm site is considered to be of low quality for otters, with low signs of foraging activity recorded. There are no signs of otter holts on the site.

The operational wind farm is unlikely to affect badger or otter. However, appropriate mitigation measures will be employed during construction phase to account for the presence of these species as a precautionary measure.

Surveys for great crested newts have also been undertaken where access to watercourses has been possible. These revealed that the site and surroundings has low potential to support this species, and no signs of these species have been recorded. However, appropriate measures will be taken to safeguard this species during the construction period as a precautionary measure.

A series of bat surveys were carried out between May and August 2008. This identified that there are no trees or buildings within the site which have the potential to support roosting bats. However, low numbers of bats have been recorded foraging along the boundary of the site, principally using one hedgerow. This hedgerow forms foraging territories for only a small number of bats. There is also a small bat roost located within Hebron.

We are minimising hedgerow loss as part of the development to minimise the potential for the wind farm to affect bats. In addition to this, the wind turbines have been sited in accordance with Natural England guidance to reduce the potential effects on foraging bats.

Noise
The noise assessments for the Longhirst Wind Farm have been undertaken in accordance with appropriate national guidance in the form of ETSU-R-97 *The Assessment and Rating of Wind Farm Noise.* The guidance requires existing background noise levels to be measured at a selection of the closest houses to the proposed wind turbines, The Castle Morpeth Environmental Health Officer (EHO) has been consulted, and has been kept informed of the assessment methodology and all monitoring locations.

Noise monitored was undertaken between 7th August and 11th September 2008 with monitoring kit located at 7 residential locations throughout that period. Additionally one extra site, Hebron Hill, was monitored for one week at the request of the EHO. The eight monitoring locations are shown on the attached Figure.

As part of the noise monitoring assessment there is also a requirement to measure wind speed and direction at ten metres in height, as well as periods of heavy rainfall. Sufficient wind conditions must be experienced over the noise monitoring period, namely a good range of wind directions and speeds ideally between 0 ms-1 and 12 ms-1 during daytime and night-time periods and during periods of no rainfall.

In order to measure the wind data, a 10m wind mast was located at approximate National Grid Ref: 420935, 589595 for the duration of the study.

The results of the noise monitoring studies will be used to design the final wind turbine layout, number and specification of the turbines. The final turbine layout will be developed to ensure that the scheme will fall within the acceptable noise limits that would be permitted at the site in accordance with government guidelines (ETSU-R-97 report for the DTI, The Assessment and Rating of Noise from Wind Turbines, September 1996).

Traffic and Transportation
A study has been commissioned to determine the most appropriate route for delivery of the turbine components to the proposed site.

In advance of the final report, the preferred access route would seek entry to the site along its western boundary. The turbines would be brought to the site using the A197, then northwards along the B1337. In the event that temporary road modifications are required, these will be agreed in advance with the Highways Agency and the County Highways Department and will be restored following construction.

Hydrology
A hydrological site visit was undertaken in September 2008. This will be supplemented by a desk top assessment, which is being undertaken to determine the potential impact of the development on local hydrological conditions and private water supplies. This will involve consultation with Castle Morpeth District Council and the Environment Agency, along with studying geological data from The British Geological Survey. The information gathered during the site visit and desk top assessment will be used to design the layout of the wind farm in such a way that turbines and associated infrastructure are not located near watercourses on the site. A fifty metre buffer zone around watercourses, in conjunction with a suitable Pollution Prevention Plan will avoid any potential impacts during the construction phase of Longhirst Wind Farm.

Landscape and Visual
We are currently undertaking a detailed landscape and visual assessment in consultation with Castle Morpeth District Council, Northumberland County Council and Northumberland National Park Authority. Visual representations of the Longhirst Wind Farm will form part of the ES and will be available to view at a number of publically accessible locations.

Cultural Heritage and Archaeology
A desk based archaeological assessment is currently in progress to establish whether any archaeological remains are known to survive within the site, in areas that have not been previously opencast.

The archaeological assessment will also consider the impact that the proposed wind farm could have on the historic environment, historic structures and buildings, designated landscapes and the historic character of the wider landscape. The assessment will consider both direct and indirect (largely visual) effects upon a number of cultural heritage receptors, including but not limited to Listed Buildings, the Longhirst Conservation Area, Scheduled Monuments, and Registered Parks and Gardens.

The scope of the desk-based assessment and any future survey work has or will be agreed in consultation with the County Archaeologist

Telecommunications and Television Reception
We are currently talking to a range of television and telecommunications companies in order to identify the exact paths of various telecommunication and microwave links. The final wind turbine layout will be designed to take the various links into account.

Television reception will be monitored during development, and any problems will be relatively easily remedied. All remedial measures would be carried out and funded by Novera.

Shadow Flicker

Shadow flicker can occur in specific atmospheric conditions where the shadow of a moving turbine blade passes over a small opening in a building, such as window. Once the final turbine layout has been developed a computer model will be used to predict any shadow flicker effects on nearby properties.

In the unlikely event that significant effects are identified, then there are relatively simple steps which can be taken to halt the turbines during the rare and infrequent occasions when shadow flicker is predicted to occur.

Socio-economics

If the proposal were to be granted consent, the wind farm development would generate a range of direct and indirect benefits to the local economy during the construction and operational phases.

Once the final turbine layout and numbers of turbines had been agreed, Novera will commission a study to look into the socio-economic effects of the proposed development on the local area. This will be reported in full within the ES.

Aviation and Radar

The Ministry of Defense have no objection to the Longhirst Wind Farm proposal, either in relation to military radar or low flying areas.

Novera's consultants are currently in dialogue with Newcastle Airport, with regard to any potential effects on their radar.