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Application Number: SO/2008/2245

Site: University Of Reading, Rushy Mead Site,

Expiry Date: 11/11/2008

Proposal: Scoping Opinion relating to a proposed Windfarm development.

Site Constraints:

7 km from Thames Basin Heaths Special Protection Area
Mineral Consultation Zone
Badger Set Consultation
Groundwater Zone
Flood Zone 2 and 3
Archaeology Consultation Zone
Cutbush Lane Public Right of Way

APPRAISAL

Landscape

The content and scope of the proposed Environmental Statement for the landscape and visual aspects of the study, as detailed in section 4.1 of the document is acceptable and will provide the necessary information to make an informed judgement regarding any future application of a wind farm on this site.

With reference to the landscape character and capacity (section 4.1.3) the ES should also refer to the Landscape Character Assessment (LCA) for Wokingham dated March 2004 and not just the Landscape Character Assessment for the whole of Berkshire, as the Wokingham LCA looks at the landscape character of the district in more detail.

Badgers

Comments have been received from the Binfield Badger Group. A search of their records was performed 2km around SU735716. This gave two records of live Badger residence as follows.

sett_ref	gref	Name	Last Date	Location
079	739715	Whiteknights	2000	Whiteknights, University Grounds
080	741707	Redhatch Copse	2000	Earley

There are no records of dead badgers within the same circle.

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From this it is evident that badgers were once living in the area. Accordingly it is considered that a check should be performed by a qualified ecologist that no badgers are currently resident within the statutory exclusion distance, and/or would have their foraging areas impacted, before the proposed work is permitted to go ahead..

Archaeology

The site is within an area of archaeological potential and 4 of the turbines as marked on the Entec map are adjacent to or within a 100m from areas marked as having potential on our SMR. A more detailed study is required, however, to analyse this potential and is welcomed. I would recommend an EIA chapter or a separate DBA whichever is more appropriate depending on the decision made on this application.

The document will include aerial photograph analysis, present and historic impacts on the site (usually by way of map regression) as a means of considering the potential survival of archaeology.

Beyond the documentary sources, the applicant is invited to contact Berkshire Archaeology to discuss any intrusive investigations required as some initial fieldwork would provide more evidence than documentary research alone. A watching brief on geotechnical investigations is one of a number of methods that could be agreed and this could well save time and money later in the project.

Natural England

For proposals such as these, Natural England would expect a detailed study to assess the phases of pre-installation, construction, operation and decommissioning of the wind farm and any potential cumulative issues, over time. Consideration will need to be given to the following areas:

- International statutory sites
- National statutory sites
- Non-statutory sites
- Local sites
- Birds, particularly with regard to the Birds Directive
- Protected species, including those under the Habitats Directive and the Wildlife and Countryside Act 1981 (as amended) and rare and nationally scarce species.
- UK Biodiversity Action Plan species.
- Hedgerow regulations
- Physical processes

Consideration should also be given to the following possible direct and indirect impacts:

- Direct habitat loss on site and other works such as cable routes, road upgrades and other infrastructure, including any associated biological impacts such as reduced species diversity, loss of feeding/breeding habitat.
- Habitat damage and associated biological impacts (as above).
- Impact of introduction of new substrates/habitat onto the site.
- Interference with any geological/geomorphological and hydrological processes e.g. slopes.
- Pollution.
- Disturbance to mobile species such as mammals and birds.

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- Bird collision.
- Bat collision
- Impacts of associated infrastructure.
- Impact on current and future land-use.
- Survey, monitoring and research to inform best-practice.
- Proposals where possible, for furthering the objectives and targets identified for priority habitats and species listed in the UK Biodiversity Action Plan, including re-creation schemes and habitat links.
- Mitigation and enhancements for the above mentioned direct and indirect impacts

We strongly recommend you consult the Environment Agency, and Berks, Bucks and Oxon Wildlife Trust for their advice with regard to this application.

Protected Species

For developments of this scale, Natural England would wish to see a full ecological report detailing any protected species issues which could arise during pre-construction, construction, operation and decommissioning phases.

Birds

Wind farms are known to have detrimental effects on the populations of certain bird species, especially raptors. Wind farm developments have the potential to impact on bird in three main ways:

- Direct loss/deterioration of habitat
- Indirect habitat loss through disturbance (including disruption to flight lines resulting from avoidance action)
- Mortality resulting from collisions with turbines or ancillary infrastructure

Due to the size and type of development proposed we recommend a full and detailed survey is carried out to assess the populations of birds which use the site and surrounding areas for breeding, roosting, feeding or migratory passage and how the development may incur the above mechanisms of disturbance. Surveys should be undertaken prior to submitting the planning application allowing this additional information to be submitted, as survey works cannot not be conditioned as part of a planning consent.

I have attached the following link which provides up to date information on the best and most appropriate methodology and suggested effort for bird survey, specifically tailored for onshore wind farm development:

http://www.snh.org.uk/pdfs/strategy/renewable/bird_survey.pdf

Bats

All bat species and their roosts are fully protected in Britain under the Wildlife and Countryside Act 1981(as amended) and the Conservation (Natural Habitats &c.) Regulations 1994.

The following mechanisms have been identified whereby wind farms may impact on bat species:

- Collision with turbine blades

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- Loss of foraging habitat
- Blocking migration or destruction of commuting routes
- Ultrasound emission by wind turbines
- Disturbance or destruction of roosts

Due to the size and type of development proposed we recommend a full and detailed survey is carried out to assess the populations of bats which use the site and surrounding area for breeding, roosting, feeding or migratory passage and how the development may incur the above mechanisms of disturbance. Surveys should be undertaken prior to submitting the planning application allowing this additional information to be submitted, as survey works cannot not be conditioned as part of a planning consent.

I attach a copy of Natural England's interim guidance on Bats and Onshore Wind Turbines for your information.

We also strongly recommend you apply the Eurobats guidelines (where applicable to the UK) to any survey methodology.

Environmental Impact Assessment

It is Natural England's view that the above proposed development will require Environmental Impact Assessment in keeping with The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999. This type of development, "Installations for the harnessing of wind power for energy production (wind farms)" is classed as "Schedule 2 Development" if:

- The development involves the installation of more than 2 turbines; or
- The hub height of any turbine or height of any other structure exceeds 15 metres

We issue the following advice to Local Planning Authorities on the scope of an Environmental Statement:

Natural England Advice on scope of the Environmental Statement Schedule 1 development in keeping with the Environmental Impact Regulations 1999

Natural England advises that the ES must include all of the information listed in Part II to Schedule 4 of the 1999 Regulations and such of the information listed in part I to Schedule 4 which is reasonably required to assess the environmental effects of the proposal.

It is therefore necessary for the ES to contain:-

- a description of the development comprising information on the site, design and size of the development;
- a description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects;
- the data required to identify and assess the main effects which the development is likely to have on the environment;
- an outline of the main alternatives studied by the applicant and an indication of the main reasons for his choice, taking into account the environmental effects;

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- a non-technical summary of the information provided under the above four bullet points.

As the application site lies relatively close to a number of Sites of Special Scientific Interest (SSSIs) and a Special Protection Area (SPA), it is Natural England's opinion the following elements of Part I are required to enable the Council to assess the environmental effects of the proposed development:-

- a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;
- an estimate, by type and quantity, of expected emissions resulting from the proposed development. Natural England recommends that the construction phase and the post-construction phases are both considered
- a description of the aspects of the environment likely to be significantly affected by the development, including, in particular, the fauna and flora of nearby Sites of Special Scientific Information (SSSI's) and Special Protection Area (SPA);
- a description of the likely significant effects of the development on the environment including the direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary, positive and negative effects of the development resulting from the existence of the development, including ground and surface water flows, the emission of pollutants and the elimination of waste and the description by the applicant of the forecasting methods used to assess the effects on the environment;
- an indication of any difficulties (technical deficiencies or know-how) encountered by the applicant in compiling the required information.

As the application site is in close proximity to the Chilterns AONB and North Wessex Downs AONB Natural England would also expect to see a full Landscape and Visual Impact Assessment.

Flood Risk

The Environment Agency have made the following comments.

FLUVIAL FLOOD RISK

As the scoping report correctly identifies much of this area falls within both Flood Zone 3 and Flood Zone 2, it is therefore at a high risk of fluvial flooding. Also both the 1 in 5 and the 1 in 20 year flood extents of the River Loddon are quite extensive and wide at the site, which places most of this area within the functional floodplain. The functional floodplain is land which has the highest risk of flooding and is determined as land where floodwater is stored or flows through during a flood event.

Table D.3 of PPS25 restricts development within the functional floodplain to only 'water compatible' or 'essential infrastructure' land uses. From table D.2. of PPS25, a wind farm should be classified as Essential Infrastructure and may therefore be permitted in the Functional Floodplain subject to passing both the Sequential and Exception Test.

As the local planning authority you should using your local knowledge determine whether the sequential and parts (a) and (b) of the exception test have been passed. Information can be provided by the developer/applicant to help you in this decision

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making process. We will only comment on part (c) of the exception test which is in essence the Flood Risk Assessment (FRA). It is also worth noting that we would object to this proposal at the planning application stage and would not review the FRA if you do not confirm to us that both the sequential and parts (a) and (b) of the exception test have been passed.

Due to the nature of the development it may not result in an increased flood risk, either on the site or elsewhere. However, this must be demonstrated as part of a detailed FRA (part (c) of the exception test).

We understand that you are proposing external kiosks 4mx3mx3m at the site to house the transformers. As it is highly likely that the development falls within the floodplain it may be necessary to provide protection from flooding to some parts of the infrastructure. It is important to note that this type of infrastructure may need to be operational at all times, even during a flood event. Therefore the FRA should consider flood proofing of these kiosks so that they can remain operational.

A sequential approach should be used to locate development on the site avoiding the areas of highest flood risk and locating buildings in areas of the lowest flood risk wherever possible. This is particularly applicable to the proposed control building the location of which has not yet been fixed and will need to be operational at all times.

We do have detailed flood modelling for the River Loddon. Our External Relations team can provide any relevant flooding data that we have available (please be aware that there may be a charge for this information). If you wish to make a data request, please send an email to custthse@environment-agency.gov.uk

SURFACE WATER FLOOD RISK

In addition, for sites larger than 1 Hectare, a surface water strategy should be carried out as part of the FRA to demonstrate that the proposed development will not create an increased risk of flooding from surface water. The surface water strategy should be carried out in accordance with PPS25 and its associated draft practice guidance, giving preference to infiltration over discharge to a watercourse, which in turn is preferable to discharge to surface water sewer.

Infiltration rates should be worked out in accordance with BRE 365. If it is not feasible to access the site to carry out soakage tests before planning approval is granted, a desktop study may be undertaken looking at the underlying geology of the area and assuming a worst-case infiltration rate for that site. If infiltration methods are likely to be ineffective then discharge may be appropriate. In any case the surface water strategy should clearly show that:

- Peak discharge rates from site will not increase as a result of the proposed development, up to a 1 in 100 year storm with a suitable allowance for climate change;
- Discharge volumes from site will not increase as a result of the proposed development, up to a 1 in 100 year storm with a suitable allowance for climate change;
- The site will not flood from surface water up to a 1 in 100 year storm with a suitable allowance for climate change, or that any surface water flooding can be safely contained on site up to this event.

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Any surface water strategy should try to utilise sustainable drainage techniques, in accordance with the SUDs management train (Ciria C609). Guidance on the preparation of surface water strategies can be found in the Defra/Environment Agency publication "Preliminary rainfall runoff management for developments". Guidance on climate change allowances can be found within Annex B of PPS25.

Annex E of PPS25 states that a FRA should be carried out by a suitably qualified person or people. Contact details for external consultants who specialise in the production of FRAs can be found at: <http://www.ciwem.org.uk/directory/find/index.asp> (by searching under desired geographical region) and <http://www.endsdirectory.com/search/>.

GROUNDWATER PROTECTION

The site is in a high risk area in relation to controlled waters. The protection of surface water in the River Loddon would be the main concern at this site.

As it is currently farmland, we are not aware of any historic potentially contaminating sources at the site. The proposed use of the site as a wind farm is also unlikely to be contaminative. Therefore there should not be a significant risk during the operation phase.

However, the construction phase may have the potential to present an unacceptable risk to controlled waters (e.g. suspended solids, spills, pathway creation). We would expect such issues to be considered within the Environmental Statement.

ECOLOGICAL CONSERVATION

There are potentially significant environmental impacts on ecology which will need to be addressed through the EIA process. The removal of native vegetation and its replacement with wind turbines may cause direct damage to, or loss of, terrestrial and aquatic habitats. We have summarised below the key potential impacts of the windfarm to ecology during both the construction and operation phase:

Aquatic Ecology

Construction Phase

Drainage works and use of vehicles

- Negative impact on flora and fauna from increased sediment loading of streams

Materials management

- Harm to aquatic flora and fauna from oil, fuel, cement or other substances entering watercourses

Operation Phase/Ongoing site maintenance

Site drainage

- Indirect effect on aquatic flora and fauna from ongoing changes to stream hydrology and morphology

Maintenance and materials management

- Direct and indirect effects from oil, fuel or other substances entering the aquatic environment

Decommissioning/Post-operation

Decommissioning

- Temporary soil mobilisation and entry into nearby watercourses by vehicular activities.

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Restoration design

- Opportunity for enhancement of nature conservation value

Terrestrial Ecology

Construction Phase

Earthworks and excavations

- Habitat removal, fragmentation or severance
- Disturbance to, or loss of, species (including rare and sensitive species)

Physical presence turbines in operation

- Potential of bird collisions

Maintenance

- Possible disturbance to local wildlife depending upon the time of year maintenance is carried out, e.g. bird breeding season and peak growing periods for plants

Decommissioning

- Temporary habitat disturbance by vehicular and machinery activities

Protecting ecology

Measures designed to prevent or reduce impacts to water or land will also benefit ecological populations. The following list identifies further strategies for reducing or avoiding impacts to terrestrial and aquatic species and their habitats:

- existing habitat features should be incorporated into site design and protected from adverse change;
- further habitats should be created to compensate for habitat losses and to improve the landscape and ecological potential of the site;
- restoration plans should incorporate measures to improve the ecological status of the former windfarm site.

FLOOD RISK CONSENT

We note from the scoping report that in order to obtain vehicular access to the site during construction a temporary 'bailey' bridge will be required. This bridge should be free-spanning to allow for the migration of species along the River Loddon so as to maintain connectivity between habitats.

Please also be aware that you will need to apply to us for a flood risk consent for this structure. The determination of a flood risk consent application can take up to two months and the bridge construction can not be started until consent has been granted. You can contact me for further details or advice on this.

Access and Movement

There will be a requirement for an assessment of the impact associated with construction traffic for the proposed development. After construction it is unlikely that the site will generate significant vehicle movements. However, it is noted that the road geometry may be required to be altered in one position, although information has not been provided to confirm where.

This would potentially be significant and if required this should be addressed.

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English Heritage

The historic environment is proposed to be included under Cultural Heritage, although Registered Parks and Gardens are also included under the Landscape and Visual chapter.

There does not appear to be any mention of conservation areas. English Heritage recommends that consideration of the potential impacts on the historic environment are considered holistically in one chapter, rather than divided which appears currently to be the case in the proposed structure.

We strongly recommend that the selection of view points should also include evidence to demonstrate potential impacts on the setting of registered landscapes and also the setting of conservation areas. Examination of townscape or landscape impacts are usually carried out employing the ILA methodology, but this does not adequately address the historic environment dimension and we therefore recommend that this is carried out by professional appropriately qualified or experienced in historic characterisation.

Operational Noise

The daily operation of the turbines will have an effect on the background noise level, which needs to be assessed and understood so that the impact on nearby residential dwellings can be minimised.

Contaminated Land

Although the proposed use of the site is not sensitive excavation works of the size proposed have the potential to provide a pathway to contaminated land that could affect workers onsite. A desk top survey should be carried out as a minimum and the need for further investigation assessed.

Shadow Flicker

The potential for Shadow Flicker must be assessed to ensure its impact on neighbouring dwellings and businesses is prevented and/or minimised.

Trees and Woodland

According to the submitted information it does not appear that the development would require the removal of any trees or woodland. However, one of the turbines is proposed to be located close to woodland and given that there would be a considerable amount of underground works for installation and cabling etc in various areas of the site, should the development appear to harm any of the trees or woodland this may need to be addressed and advice sought from the Forestry Commission and Woodland Trust.

Berkshire Buckinghamshire, Oxfordshire Wildlife Trust

A response has not yet been received from the above organisation however they are in receipt of the documents and wish to comment. Due to workload commitments it is not possible for a timescale for response to be provided. As such the comments will be forwarded to the applicant once received and will be required to form part of the

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consideration in preparing the Environmental Statement. This has been highlighted in a letter to the applicants.

Date:

Case Officer: