

2. Operational Phase

2.1 Oils and Chemicals

Objective nineteen - To minimise the risk associated with oil and chemicals used on site when the wind farm is operational.

ACTIONS

Operational Control

The volumes of oils, fuels and chemicals stored on site that are necessary during construction, if at all, will not be required once the wind farm is operational.

However, oil will be contained within the turbine generator and gearbox and transformers to enable these to operate effectively.

a) The turbines are constructed so that any leak of oil from the generator and gearbox within the nacelle would be contained within the turbine.



Access to the turbines for maintenance

b) All turbine transformers will be sited on bunded foundations that are able to contain 110% of the oil contained within it.

c) Any leaks will be contained and will be mopped up during maintenance and will be transported and disposed of as required by the Hazardous Waste Regulations and Duty of Care (See 'Relevant Legislation' below).

d) Any oil and chemicals required during maintenance would be brought on site in minimum quantities on an 'as required' basis by the technicians; this reduces the risk's that would be associated with storing large volumes on an unmanned site.

e) Fuels and chemicals will be stored in bunded lockable vessels contained within the construction compound, any

transportation of fuel to vehicles will utilise a wheeled bunded bowser. Any onsite refuelling vehicles will utilise drip trays.

f) Emergency spill kits will be provided at the fuel storage area, with the mobile bowser and in large plant items.

g) Any chemical containers will be bunded in a manner so as to retain at least 110% volume of the largest tank within the bund, with bunding impervious with no associated drainage.



A bunded transformer

Relevant Legislation

The Control of Pollution (Oil storage) Regulations 2001 contains specific requirements for the safe storage of oil in any tank or container of greater capacity than 200 litres. The containers must be robust and in good condition and must be situated within adequate secondary containment to prevent the release of any oil that has escaped from its container and positioned to minimise the risk of impact. Although these regulations do not apply to oil contained in generators and transformers that is being used or stored in quantities less than 200 litres the potential for harm to the environment from an oil spill remains. Therefore it is good practice to provide secondary containment.

The Water Resources Act 1991 states that preventative action to minimise the risk of accidental spillage of a polluting substance being discharged into controlled waters must be taken.

The Hazardous Waste Regulations 2005 Regulation 29 allows a mobile service operator producing waste in the course of their business from premises at which they perform their mobile service activities, to register their main operating premises rather than the premises at which they produce the waste. This is dependent on a tenure restriction (Regulation 31) and a qualifying limitation (Regulation 30(1)(a)). The tenure restriction is that this only applies where the mobile service operator neither owns nor occupies the premises where they perform their mobile service activities.

Under both the Hazardous Waste Regulations 2005 and The Environment Protection Act 1990 and The Environment Protection (Duty of Care) Regulations 1991 movement of waste without using a registered carrier or

one who is exempt from registration would be an offence. A waste producer carrying their own waste is exempt.

2.2 Noise

Objective twenty - To ensure that noise emissions are controlled to acceptable levels during the operation of the Lambs Hill Wind Farm.

ACTIONS

Operational Control

The wind farm has been designed to comply with noise limits contained in ETSU-R-97, The Assessment and Rating of Noise from Wind Farms. The following monitoring measures will confirm that the wind farm is operating within the predicted limits.

- a) The turbine noise level shall not exceed the levels (measured as dB LA90, 10min) specified in Condition 40.
- b) Within six months of the wind farm being commissioned, a noise survey will be conducted to assess the noise levels from the wind farm at or adjacent to locations agreed with the Environmental Health Officer (subject to permission from the various householders) in line with a methodology agreed with the LPA.
- c) The results will be compared with the predicted noise levels to confirm that the wind farm is functioning as predicted.
- d) Once it has been confirmed that the wind farm is operating within these limits the malfunction shut down mechanism and maintenance of the turbines will ensure that these noise limits are not exceeded due to malfunction.



Noise monitoring

- e) Wind speed and direction data will be measured at a height of 10 metres throughout the duration of the operation of the wind turbines and provided to the local planning authority if requested to enable the council to check noise compliance.

Relevant Legislation

Under the Environmental Protection Act (EPA) 1990 levels of noise that are prejudicial to health or interfering with an individual's right to use or enjoy their property is a Statutory Nuisance therefore 'Best Practicable Means' (BPM) should be taken to prevent/abate any noise nuisance.

2.3 Television Reception

Onshore wind turbines can cause electro-magnetic interference (EMI) in certain circumstances, with physical interference causing a 'scattering' of signals which can lead to a phenomenon called 'ghosting' on some television screens.

Objective twenty one - To ensure that any complaints in relation to television reception are fully investigated with appropriate action being taken by following a complaint and notifiable incidents procedure.

Banks Renewables implements an external complaints and notifiable incidents procedure as part of the Environmental Management System. The following outlines the steps that will be followed should a complaint relating to television reception be received by telephone, letter, fax, email, personal call or at any liaison committees.

An independent assessment of terrestrial TV reception undertaken prior to the wind farm becoming operational has been submitted to the local planning authority in accordance with Condition 25.

Any complaints within 12 months of commissioning of the wind farm will be investigated by a qualified TV engineer, and the results submitted to the local planning authority.

ACTIONS

- a) Prior to work commencing on the Wind Farm development contact details for the operators of the wind farm will be circulated within the local community.
- c) On receipt of a complaint, the Banks Renewables complaint and notifiable incidents procedure will be followed.
- d) Complaint forms will be available at all area offices and on site during the construction phase. Details to be recorded on the complaint form include the name and contact details of the complainant, the date the complaint was received, the date and time the issue commenced, details of the concern, who received the initial complaint, details of investigation and action taken, how the complainant was informed of the investigation results and any action taken.
- e) All complaints will be acknowledged either by telephone, personal call, email or in writing.

f) Within the first 12 months of the first generation of electricity to the grid a qualified television engineer will be used to investigate any claims for domestic television picture loss / interference or radio broadband signal loss / interference, with results being submitted to the local planning authority.

g) If following the investigation process the complaint is found to be justified and attributable to the wind turbines on the basis of the baseline study, then further action as below will be taken to resolve the issue within the first two weeks of the commencement of investigation, unless otherwise agreed in writing with the local planning authority.

h) Where possible, the engineer will rectify the loss of interference to TV reception while present at the complainant's property. If this is not possible (for example where additional equipment is required), the engineer will rectify the loss or interference within one week of visiting the complainant property, unless otherwise agreed with the local planning authority.

i) The complaint will only be closed out when the full investigation and any action identified has been undertaken to resolve the matter.

2.4 Shadow Flicker

During certain weather conditions the rotating wind turbine blades can cast moving shadows that may cause a flickering effect that would occur within a dwelling.

The extent to which this effect exists is dependent upon the height of the turbines, along with the angle of the sun in relation to the ground and the presence of any structures. Shadow flicker may only occur in relative proximity to the wind farm site – allowing for this affect to be effectively mitigated against.

Objective twenty two - To ensure that shadow flicker does not adversely affect any properties within the shadow range of the Lambs Hill Wind Farm.

a) A shadow flicker mitigation protocol will be submitted and approved by the local planning authority in accordance with Condition 36 prior to the erection of the turbines.

b) Turbine operation will take place in accordance with the approved mitigation protocol where required, unless otherwise agreed in writing by the local planning authority.