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The British Horse Society
Charity No. 210504

Wind Farms

Draft dated 19/3/08

This advisory statement replaces the Society's previous advice note on wind farms. This statement gives advice to developers, councils and horse riders as to the safety implications for horses and their riders or drivers arising from the construction and operation of wind turbines in the vicinity of routes for riding and/or driving horse drawn vehicles (HDV).

This advice deals with the large commercial turbines, however, the Society advises that the recommended separation distances in its revised policy should apply to *all* wind turbines.
The key aim of this statement is to ensure that the safety implications for horses and riders, carriage drivers and other users of rights of way and the road network are taken into account and addressed in the determination of planning applications for wind farms.

The Climate Change Bill will put into statute the Government's long-term 2050 target to reduce carbon dioxide emissions by at least 60 percent from their 1990 levels.

The Society normally restricts itself to commenting on the safety implications for equestrians and rarely comments on either the aesthetics or economics of turbines.

Whilst The Society accepts that the wind industry has a good safety record, there have been some significant structural failures in respect of wind turbines, for instance:-

- 8 November 2007 Structural failure of a 63-metre tall wind turbine bent in two at Beinn an Tuirc Windfarm Scotland, resulting in its partial collapse.
- 11 May 2007 Test mast blown down at Cunnighill, Scotland
- 25 February 2007 Blade snap Llanmiloe Wales
- 23 December 2005 Turbine fire Nissan Car factory Sunderland

The Society expects developers to demonstrate in the planning application process the steps they have taken to protect the public from any such incidents.

Many riders (and carriage drivers) are hesitant in taking their horses near wind turbines. There are varied reports from those who do, some report initial signs of fear, which either become magnified as they approach the turbines, or diminish as the horse discovers no or little threat.

The Society submits that horses may react adversely to the following aspects:

- **Blade Shadows**

In sunshine the rotors of a wind turbine will cast a shadow the horse is being asked to cross which may frighten some horses. This can affect ground a considerable distance from the turbine at times of day or year when the sun is very low. Blade shadows are not a problem if the turbine is to the north of the right of way or road. The Society expects developers to provide, as part of the planning application, details of the extent of shadow throw.

- **Blades starting to turn** whilst in the horse's sight line *may* upset the horse, but this is rarely likely to happen as blades are usually high above the horse's eye line. If a turbine appears at 'eye level' it is likely to be a considerable distance away and not normally a threat.

- **Noise.** Noise levels from turbines are generally low and, under most operating conditions, it is likely that turbine noise would normally be completely masked by wind generated background noise.

The following table in the Companion guidance note to PPS22 (Planning Policy Statement 22: Renewable Energy) www.communities.gov.uk/documents/planningandbuilding/pdf/147447 on page168 compares noise generated by wind farms with everyday activities .

Table 1 Noise generated by wind turbines compared with other everyday activities

Source/Activity	Indicative Noise Level dB(A)
Threshold of Pain	140
Jet aircraft at 250 m	105
Pneumatic drill at 7 m	95
Truck at 30 mph at 100 m	65
Busy general office	60
Car at 40 mph at 100 m	55
Wind farm at 350 m	35-45
Quiet bedroom	20
Rural night-time background	20-40
Threshold of hearing	0

Recommended good practice on controlling noise from wind turbines is set out in 'The Assessment and Rating of Noise from Wind Farms' (ETSU for DTI 1997) and states,

'*The current practice on controlling wind farm noise by the application of noise limits at the nearest noise-sensitive properties is the most appropriate approach.*

Noise limits should be applied to external locations and should apply only to those areas frequently used for relaxation or activities for which a quiet environment is highly desirable.

Noise limits set relative to the background noise are more appropriate in the majority of cases.

Noise from the wind farm should be limited to 5 dB(A) above background for both day- and night time, remembering that the background level of each period may be different.'

The Society expects developers to provide, as part of the planning application, details of the indicative noise levels dB(A)

- **Ice** falling off blades.

The Society expects developers to provide, as part of the planning application, details of the mechanisms that will be installed to ensure that turbines will stop automatically when blades become encrusted with ice.

Assessment and Construction period.

The assessment and construction period of wind farms can have safety implications for all highway users especially equestrians as well as the erected turbines themselves, and appropriate measures need to be taken to address these.

Planning Applications for Temporary Anemometers.

The Society recommends that no anemometer should be situated closer than fall over distance plus 10 percent from a bridleway, byway, restricted byway, public road or other public route used by equestrians and that no associated cables should be situated any closer than 30 metres from an unfenced road, bridleway, byway, restricted byway or other public equestrian route, as the cables can be difficult to see, especially for a startled horse.

Construction and Maintenance.

A 10-turbine farm could have an approximately 6-month construction period. It may generate an

average of 60 'traffic movements' i.e. 30 journeys in, 30 out, per working day for construction vehicles, including HGVs and concrete mixers, and employees' cars.

The Society expects developers to provide, as part of the planning application, details of :

- The length of the construction period
- The amount of vehicular movements during the construction and maintenance periods
- The route of vehicular movements
- Any engineering works to be carried out on the surrounding road network to cater for the construction and maintenance traffic

If any such works will involve:-

- Widening of narrow lanes the Society will expect the developer to do this by strengthening the verge and then re-grassing it to the original width so that the result is not a widened lane that will increase traffic speeds

- Altering junctions, corners and bends to accommodate the low-loaders the Society will expect that the final layout will not disadvantage equestrians by removing wide verges on which they wait to cross roads.

Planning Policy Statement 22 Renewable Energy

Planning for Renewable Energy A Companion Guide to PPS 22 Technical Annex Wind (onshore) published in 2004 states at page 172 para 56 that:

"*The British Horse Society, following internal consultations, has suggested a 200 metre exclusion zone around bridle paths to avoid wind turbines frightening horses. Whilst this could be deemed desirable, it is not a statutory requirement, and some negotiation should be undertaken if it is difficult to achieve this."*

The British Horse Society Policy

In 2007 the British Horse Society reviewed its wind farm policy in respect of both separation distances and proximity to roads.

The Society's current policy is

*'That, as a starting point when assessing a site and its potential layout, a separation distance of 4 times the overall height should be the target for National Trails and Ride UK routes, as these are likely to be used by equestrians unfamiliar with turbines, and a distance of 3 times overall height from all other routes, **including roads**, with the 200m recommended in the Technical Guidance to PPS 22 being seen as the minimum, where it is shown in a particular case that this would be acceptable. The negotiation process recommended in PPS 22 should indicate whether, in the particular circumstances of each site, these guidelines can be relaxed or need strengthening to minimise or eliminate the potential difficulties.'*

Where the recommended separation distances cannot be achieved, the Society will expect the developer to demonstrate :

- How safety issues can be ameliorated by carrying out agreed works

- Details of an alternative route that could be used by equestrians whose horses will not use the existing route because of the closeness of the turbines to the road or right of way

- Details of the provision of funds to improve other rights of way or create new routes in the locality

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