



SUGGESTED WIND FARM PLANNING CONDITIONS

1. Introduction

During the second half of 2008, the Sadberge Parish Plan was extended to cover the issue of wind farms near Sadberge. In accordance with Parish Plan Action 11.5, Sadberge Parish Council requests that Darlington Borough Council ensures that the conditions described in this note are attached to any planning consent for a wind farm in the north-eastern part of the Borough of Darlington.

Note: This note does not pretend to give a complete list of the planning conditions that should be attached to any planning consent for a wind farm. The emphasis is on putting forward conditions that will cover deficiencies in the "standard" planning conditions for wind farms.

2. Planning considerations

Planning permission for a wind farm development should not be granted until and unless the following conditions are satisfied.

- 2.1 No wind turbine will be situated so that it looms over any dwelling.

Commentary: We will be happy to work with you to specify a practical, quantitative measure of the extent to which a wind turbine 'looms over' a dwelling. We suggest that this measure is based on the angle at which someone standing beside the dwelling needs to look up in order to see the hub of the wind turbine.

- 2.2 Durham Tees Valley Airport makes a formal statement that it is satisfied that aircraft safety will not be compromised by the wind farm.

Commentary: Wind turbines can interfere with air traffic control radar. The issues are technically complex and the practical effects of any interference are specific to the particular radar facility and the particular wind farm. Any mitigation measures are also specific to the particular situation and understanding the reasons for – and the effects of – these mitigation measures requires technical know-how.

It is normal for a radar impact assessment to be paid for by the developer, but we understand that the results of the assessment are generally not made public due to reasons of commercial confidentiality.

Given this background, it is not sensible to expect members of the public or elected councillors to be able to make detailed judgements about the technical impacts of wind farms on air traffic control radar. However, local residents have a legitimate concern about the safety of aircraft flying over their homes, and it is reasonable to ask the relevant experts to make a formal statement that this safety will not be compromised.

If the relevant experts are unable or unwilling to make such a statement then it would be perverse to grant planning permission for the proposed wind farm.

/ continued

- 2.3 The Royal Society for the Protection of Birds (RSPB) confirms that it is satisfied that the wind farm will not cause any significant harm to significant numbers of birds.

Commentary: Many people are concerned that wind turbines harm or kill birds. However, members of the public and elected councillors are not in the best position to make judgements about the likely impact of particular wind farms. Therefore, we suggest that the judgement is made by the RSPB, which has relevant expertise in this area.

If the RSPB is not satisfied that – taking account of any mitigation measures agreed by the developer – the proposed wind farm will not cause any significant harm to significant numbers of birds then planning permission should not be granted.

3. Conditions to be attached to any planning consent

Planning consent for a wind farm development should be subject to the following conditions.

- 3.1 The noise generated by the wind turbines is assessed in accordance with ETSU-R-97, "The Assessment and Rating of Noise from Wind Farms" and mitigation measures are put in place to ensure that the noise remains within the levels specified in ETSU-R-97.

Commentary: We understand that this is a standard planning condition. See section 3.10 of the "Onshore Wind Energy Planning Conditions Guidance Note".

- 3.2 Each wind turbine is stopped whenever that turbine is contributing to an audible 'beating' noise at any building regularly used by people.

Commentary: ETSU-97 involves measuring the noise level (above background), but does not take into account the nature of the noise. In practice, the amount of disturbance caused by a noise source depends as much on the nature of the noise as the noise level. For example, a dripping tap making a sound near the lower threshold of hearing can cause more disturbance than a much louder broadband sound such as the noise of wind in the trees.

The Sustainable Development Commission's document "Wind Power in the UK: A guide to the key issues surrounding onshore wind power development in the UK" acknowledges that the aerodynamic by wind turbines can result in "periodic audible swishes, which whilst not impulsive in the same way that hammering or pile driving is, can lead to a 'beating' noise effect".

We understand that one cause of this type of 'beating' noise is interference between the sounds produced by the different wind turbines in a wind farm. It is worth noting that guitarists often use the beating effect between two guitar strings when they are tuning their strings. We further understand that the low frequency 'beating' noise generated by wind farms can be heard over considerable distances – e.g. over a kilometre – and can cause a serious nuisance to people living in the affected areas.

Condition 3.2 is intended to prevent this nuisance by requiring relevant wind turbines to be stopped whenever the wind farm is generating this type of 'beating' noise.

We would be happy to work with you to develop a practical definition of what constitutes an "audible 'beating' noise".

Note that the methodology prescribed in ETSU-97 is particularly poor at giving protection from 'beating' or periodic noises because the measurement specified in ETSU-97 is of the average noise over a 10 minute period. A loud noise that is

present for 10% of the time is therefore treated in the same way as a constant noise at one tenth of the volume. This measurement therefore seriously underestimates both the volume of a periodic noise and its tendency to cause disturbance.

- 3.3 The wind turbines are designed and installed in accordance with current best practice regarding noise reduction, and this is confirmed by an independent expert appointed by the Local Planning Authority and paid for by the developer.

Commentary: We understand that over the years developments in wind turbine technology have led to designs that generate significantly reduced levels of noise. As the noise generated by a wind farm has the potential to cause a very serious disturbance to nearby residents, it is reasonable to require that any new wind farms should be designed and installed in accordance with current best practice regarding noise reduction.

As modern wind turbine designs are also more efficient than older designs, we do not believe that this condition 2.3 will be unduly restrictive on the wind farm developer.

- 3.4 Each turbine is stopped whenever that turbine causes noticeable 'shadow flicker' at any building regularly used by people.

Commentary: We understand that this is a standard planning condition used to prevent the nuisance of 'shadow flicker'.

- 3.5 Any impairment to television reception due to the wind turbines is promptly corrected at the developer's expense.

Commentary: We understand that this is a standard planning condition.

- 3.6 The construction activities are planned and managed so as to minimise the disturbance to local residents.

Commentary: We understand that this is a standard planning condition. We would be happy to work with you to define exactly what this condition should say for each individual wind farm.

- 3.7 Any wind turbine that is out of operation for six months is removed.

Commentary: We understand that this is a standard planning condition.

Even if issues such as noise, shadow flicker, aircraft safety, etc. are addressed, many people regard wind turbines as an undesirable visual intrusion into the landscape. The associated loss of amenity must be balanced by a benefit being created by the wind turbines. This benefit derives from the generation of electricity without an associated emission of carbon dioxide.

If a wind turbine is not generating electricity then it is not providing any benefit and it should be removed.

- 3.8 Any wind turbine that achieves a capacity factor of less than 10% over any continuous twelve month period is removed.

Commentary: Condition 3.8 is a logical extension of condition 3.7. If a wind turbine is only generating very small amounts of electricity over an extended period then it is not providing sufficient benefit to justify the loss of amenity caused by its visual impact.

- 3.9 After 25 years, the wind turbines are removed and the land is reinstated unless a further planning application is made and approved.

Commentary: We understand that this is a standard planning condition.

Wind turbines are generally assumed to have operating lives of 20 - 25 years. One of the arguments used by proponents of wind power is that if wind farms are no longer needed then the wind turbines can be removed and the land can be returned to its original condition.

It is sensible to require a test of the continuing need for each wind farm at the end of the turbines' operating lives. If, at that time, the case for continuation of the wind farm cannot be made to the standard required for planning permission then the wind farm should be closed down, the wind turbines should be removed and the land should be reinstated.