

SADBERGE PARISH COUNCIL

Adrian Hobbs
Planning Officer
Darlington Borough Council
Town Hall
Darlington
County Durham
DL1 5QT

Mayfield House
Middleton Road
Sadberge
Darlington
County Durham
DL2 1RR
Phone: 01325-333333
Mobile: 07966-312980
31st May 2011

Dear Adrian,

Application reference: 11/00160/FUL

Sadberge Parish Council **objects** to the application to construct a wind farm at Moor House for the following reasons:-

- (1) Commercial-scale wind turbines should not be situated amongst the settlements on the Tees Plain to the north-east of Darlington

Planning Committee members need to appreciate the truly massive scale of these industrial structures, and it would be advisable for them to visit existing wind turbines of the size proposed for Moor House as part of their preparation for determining this planning application.

- (2) The proposed wind farm would have an unacceptable negative visual impact on the landscape.

Although the number of wind turbines in the proposed wind farm falls within the "wind turbine cluster size" specified in Arup's report on "Wind Farm Development and Landscape Capacity Studies: East Durham Limestone and Tees", Sadberge Parish Council believes that structures of the proposed size in the proposed location would have a dominant and overbearing visual impact, which would be detrimental to the lives of residents of Sadberge and other nearby communities.

Although the revised proposal would have a reduced horizontal span when compared with the original 10-turbine proposal for Moor House, the increase in turbine height from 100 / 110 metres to 125 metres would make the turbines even more dominant and overbearing in the view from the northern edge of Sadberge (and from other viewpoints).

- (3) No permission should be given for any wind farm on the Tees Plain until and unless Durham Tees Valley Airport makes a formal, public statement that it is satisfied that aircraft safety will not be compromised.

It would be perverse – and totally unacceptable – for planning permission to be granted for the proposed Moor House wind farm until and unless it has been established that aircraft safety will not be compromised. Also, since the issue of safety is very important

/ continued

and is of legitimate concern to local residents, no planning permission should be granted until and unless Durham Tees Valley Airport has made a public statement confirming that it is satisfied that aircraft safety will not be compromised. This matter should not be dealt with "behind closed doors".

The Environmental Statement for the original 10-turbine proposal emphasised that two different turbine heights were being proposed in order to avoid breaching Durham Tees Valley Airport's Outer Horizontal Surface. The Environmental Statement for the revised application admits that the proposed 125-metre-high wind turbines would infringe the airport's Outer Horizontal Surface by up to 25 metres, which means that they would extend into the airport's safeguarded airspace.

The Environmental Statement proposes that planning conditions should be used to mitigate the impact on Durham Tees Valley Airport's air traffic control radar systems. If this approach is taken then the planning conditions should include a restriction preventing the wind farm from exporting any electricity until Durham Tees Valley Airport has made a public statement confirming that it is satisfied that the technical mitigation systems are effective and reliable, and that it is satisfied that aircraft safety will not be compromised by the existence or operation of the Moor House wind farm.

- (4) There is no reliable assurance that noise from the proposed Moor House wind farm will not cause harm and annoyance to residents of individual properties and/or settlements in the surrounding countryside.

No planning permission should be given for any wind farm on the Tees Plain to the north-east of Darlington until and unless there is a satisfactory way of protecting local residents from all types of noise from wind turbines, not just the types of noise covered by ETSU-R-97.

Sadberge Parish Council has previously submitted a portfolio of evidence about wind farm noise in general and EAM in particular.

The Moor House Environmental Statement reports a noise assessment that concludes that the noise from the wind farm will be within the limits specified in ETSU-R-97.

However:-

- ETSU-R-97 assumes a fixed, constant level of wind shear. The Moor House wind farm noise assessment attempted to overcome this failing by using a "site specific wind shear" (paragraph 8.31 on page 153). However, the details of the methodology mean that the assessment is based on a long term average wind shear that does not take account of the significant variations in wind shear from day to day and within a given day.¹

Basing a noise assessment on the long term average wind shear is equivalent to basing a flood risk assessment on the long term daily average rainfall.

During periods of high wind shear the difference between the noise emissions from the wind turbines and the masking noise near ground level is considerably larger than would be expected from the long term average wind shear.

¹. An example of the hour by hour variation in the wind shear over the Moor House site can be viewed at www.sadberge.org.uk/wind_shear.htm.

The Clerk to Sadberge Parish Council will explain this issue in more detail during his meeting with Darlington Borough Council's Principle Environmental Officer on Tuesday 8th June 2011.

- ETSU-R-97 takes no account of – and provides no protection against – the phenomenon of excess amplitude modulation (EAM), which causes wind causes wind farm noise to take on a loud, "thumping" character and to become audible at a considerable distance from the wind farm. The causes of EAM are not fully understood, but there is good reason to believe that high wind shear is a key contributory factor.

The Parish Council's analysis of the wind speed and direction data from the Moor House wind monitoring mast showed that there are there are frequent periods of very high wind shear over this part of the Tees plain (see the box below for further details), and the Planning Officers' report on the original Moor House Wind Farm planning application reported that a study by Parsons Brinckerhoff had concluded that there is "greater than average risk" of amplitude modulation at the Moor House site.

In the light of this, no planning permission should be granted for the proposed Moor House wind farm unless that permission is made subject to a planning condition that gives local residents effective and timely protection from EAM noise if it occurs.

The Planning Officers' report on the original Moor House Wind Farm planning application proposed a planning condition (Condition 22) intended to protect local residents from harm from EAM noise. However, that planning condition is defective, and would not enable Darlington Borough Council to provide residents with the necessary protection within an appropriate time-scale. This is explained in detail in a letter dated 7th November 2010.

The Parish Council is willing to work with Darlington Borough Council to draft planning conditions to provide residents with effective protection against harm from possible excess amplitude modulation (EAM) noise from any wind farms that are given planning permission.

Summary of the results of the Parish Council's analysis of the wind speed data from the Moor House wind monitoring mast

During four months in 2009 there were 29 periods, each lasting for at least three hours, when the wind speed at 60 metres above ground level was 5 ms^{-1} or more and there was very high wind shear. The total time in these periods of very high wind shear was a little more than 125 hours. Note that this excludes shorter periods when there was very high wind shear but it persisted for less than three hours.

If the four months' wind speed data is representative of atmospheric conditions over this part of the Tees Plain then it can be expected that on about 120 occasions per year – with a total time of about 500 hours a year – the atmospheric conditions will be conducive to the generation of EAM from the Moor House Wind Farm for at least three hours at a time. It should also be noted that these periods of very high wind shear occur almost exclusively during evenings and overnight; i.e. between 5 p.m. and 9 a.m.

- (5) During the construction phase, construction traffic – including HGV's and abnormal loads – travelling to and from the wind farm site would displace other traffic through Sadberge village, causing significant disruption to the lives of residents.
- (6) There is no proper mechanism for addressing the issue of cumulative impact of wind farms in the area to the north-east of Darlington.

No planning permission should be given for any wind farm on the Tees Plain to the north-east of Darlington until and unless there is a proper, satisfactory process for taking account of cumulative impact of wind farms.

PPS22 states that *"Planning authorities should also take into account the cumulative impact of wind generation projects in particular areas"*.

Phil Wilson MP has pointed out that there is a great deal of interest by wind farm developers in East Durham and the Tees Plain, and that he is concerned about the cumulative impact that so many proposed wind farms could have on the local landscape.

In the area to the north-east of Darlington:-

- Planning consent has been granted for a four-turbine wind farm at Lamb's Hill, near Stillington.
- Planning applications have been submitted for wind farms at Moor House and Newbiggin.
- E.ON has said that its proposed site at The Isles (which incorporates the A1 wind farm site) could accommodate 25 - 45 wind turbines.

Any assessment of cumulative impact needs to take account of all the above wind farms.

Sadberge Parish Council also points out that:-

- The distance between the proposed Newbiggin and Moor House wind farms is only 2.8 km, so they would not meet the requirement for wind farms to be separated by at least about 5 km.
- One of the conclusions in the Addendum to Arup's Landscape Capacity Studies report is that *"development of Moor House and East Newbiggin would result in possibly unacceptable effects on Sadberge"*.

Sadberge Parish Plan

Please note that the Parish Council's comments on this planning application are in line with the Sadberge community's views on wind farms in this area, as expressed in the Wind Farms Addendum to the Sadberge Parish Plan.

Work on the Wind Farms Addendum began in July 2008 (which was after the scoping reports for the proposed Moor House and East Newbiggin wind farms had been issued). Preparation of the Wind Farms Addendum involved extensive consultation with Sadberge residents, including an Open Meeting held in Sadberge Village Hall on 18th September 2008 and a questionnaire that was delivered to all Sadberge households.

The questionnaire asked whether we should oppose or accept the construction of wind farms near Sadberge. There was a 43.1% response rate, and 75.7% of the responses said that we

should oppose wind farms in this area. Further details are available on the Sadberge web site at www.sadberge.org.uk.

On 16th December 2008, Sadberge Parish Council formally approved and adopted the Wind Farms Addendum as part of the Sadberge Parish Plan.

A copy of the Wind Farms Addendum to the Sadberge Parish Plan – together with two supporting documents – is available on the Sadberge web site.

If anything in this letter requires further clarification then please contact me.

Yours sincerely,

Alastair Mackenzie
Clerk to Sadberge Parish Council
Email: alastair@batmail.co.uk