

Town and Country Planning Act 1990

Appeal by Banks Developments
against refusal of planning permission by
South Lakeland District Council

**Proposed Construction of 6 x 100m high
Wind Turbine Generators
and miscellaneous works
at
Armistead,
Old Hutton, Kendal, Cumbria**

Proof of Evidence
of
Mrs Jane Davis
(incorporating Statements from Steve Rashleigh and Lynn Harlock)
for
CPCSL
(Countryside Protection Consortium of South Lakes)

Title: One families devastating experience of wind farm noise

March 2008

PINS /Ref APP/M0933/A/08/2090274
South Lakeland District Council ref: SL/2008/0318

Agent: Dr M J Hall, The Old Byre, Rigmaden Court, Mansergh, Kirkby Lonsdale LA6 2ET
hallmj@kencomp.net

Introduction

1.1.

My name is Jane Davis. I am a Nurse, Midwife and Health Visitor. I have a Masters Degree from Manchester Business School. I retired in July 2006.

1.2.

I live with my husband Julian Davis, who holds a BSc some 930 m from Deeping St Nicholas Wind farm, just south of Spalding in South Lincolnshire. The terrain is generally flat farmland. We are tenant farmers.

1.3.

The windfarm at Deeping St Nicholas consists of eight 2MW REpower MM82 turbines.

1.4.

There are six other houses situated a similar distance away from the turbines. Ours is the only one downwind of the prevailing wind from the turbines and our nearest neighbours are a quarter to half a mile away, further away from the wind farm.

1.5.

The wind farm was built in 2006 and became operational in early June that year — within three days we became aware of problems with the noise and hum emanating from the wind farm.

2. Our situation

2.1.

We did not object to the wind farm in the planning stage as we did not believe that there would be any issues for us, and we believed that wind power was a good way of meeting the energy gap. We read some negative reports on the internet but could not believe there would be any issues for us, as we were never specifically consulted, nor were any background noise readings taken at our house. With hindsight, it was a serious mistake to trust the developer to ensure that we would not be exposed to an increase in noise levels in the way we have. As I was busy fighting cancer at the time, and required chemotherapy and surgery I had other priorities in my life than considering whether or not we were being told the truth by Wind Farm Developers.

2.2.

Since June 2006 we have had constant issues with various loud noises and low frequency sounds that create a hum in the house all the time, not merely when the turbines are turning. We have kept a log throughout.

2.3.

Many times during the summer of 2006 when we were at home, the noise of the turbines meant we were woken by loud “WHOOSHING” noises. This noise interrupts sleep; it stopped us sleeping for more than 4 hours a night. This noise is not confined to when we are directly downwind; it is worse when we are directly downwind.

2.4.

From our observations there are a number of factors which emphasise the turbine emissions

- Shelter – trees tend to filter out other sounds, making the sound of the turbines clearer.
- Reflective Surfaces – Buildings reflect the sound, increasing the annoyance and making the enveloping of the area even more complete.
- Insulation from other sounds (double glazing, wall insulation, ear plugs etc) leads to greater selection for lower frequency sound pressure waves as they have a much greater ability to penetrate and are practically impossible to protect against in a domestic situation.
- Wind direction: Most effects are worst when the wind is from a southerly direction, blowing through the wind farm toward our home. Whooomph and AM only occur with this wind direction. However, the other aspects of the noise are always present to some extent regardless of wind direction. Lower frequency emissions vary little in perceived amplitude irrespective of wind direction or turbine operation. But a difference in amplitude can be detected. Stable air conditions are associated with temperature inversion on summer evening, i.e., still air and quiet at ground level but strong wind at 100 metres above ground level. Our experience suggest that the applicants comments in 6.6.13 – 6.6.15 do not necessarily hold true, as one single turbine on its own can create AM.

2.5.

We no longer have a mole problem. I attribute this to the fact that instead we seem to have a low frequency noise problem. We can demonstrate this, and the appropriate graphs are attached as Appendix A. Our experience differs from 6.6.16 – 6.6.18. At the date of writing this proof we do not believe that there is enough peer reviewed scientific medical information in the public domain to be able to conclusively prove an absolute relationship between low frequency noise and human health deficits but the balance of research does seem to be suggesting that this in fact does exist.¹

¹ Tuning and sensitivity of the human vestibular system to low-frequency vibration

Neil P. McAngus Todda*, Sally M. Rosengrenb, James G. Colebatchb
a Faculty of Life Science, Jacksons Mill, University of Manchester, Manchester M60 1QD, UK

2.6.

We informed our local environmental health department in June 2006, and they came out and seemed astonished at the loud noise level recordings that they made. Then they realised that noise from wind farms is measured and assessed in a different way from any other noise. Our local Council have found it impossible to measure compliance with the planning condition as set, mainly because they do not have the resources and expertise available to the windfarm industry. DEFRA has recognised this, and has tendered for the production of a methodology that Councils can adopt to ensure that they can set appropriate noise planning conditions that are both measurable and enforceable.

2.7.

We even found that the Local Government Ombudsman could not help us because decisions of the Inspector, Dr Gossop, who set the noise condition are outside of their jurisdiction. However, both the Local Government Ombudsman and the Parliamentary Ombudsman have written that ETSU-R-97 is 'vague and open to interpretation' and as regards taking background noise measurements, the Council have no authority to request a wind farm shut down to take background noise measurements, etc.

3. ETSU-R-97

3.1.

The government's preferred guidance for assessing the noise from wind turbines known as ETSU-R-97, uses an LA90 10 minutes descriptor. This ignores all but the quietest 10% of noise in each 10 minute measurement period so has the effect of removing any noise peaks. Thus it is quite easy to see why the use of the ETSU -R-97 guidance is not in fact effective to protect or guarantee residential amenity if a residence is exposed to noise from turbines. The guidance is quite clear; it says in the body of the text that it exists to ensure that windfarms can be operated, not to protect, residential amenities in the locality of turbines.

3.2.

This is different from any other noise creating type of development. Generally, if one was to run a factory, or, say, a waste disposal business or undertake some sort of activity which is intrinsically noisy, planners would want you to site it sufficiently far away from residences so as to avoid, or at least minimise the possibility of complaints. Of course, I understand that non-audibility is

b Prince of Wales Clinical School and Medical Research Institute, University of New South Wales, Randwick, Sydney, NSW 2031, Australia

something which is very difficult to achieve, but in setting planning conditions, it is clear nowadays from looking at local plans and other Government guidance that the desired result is to avoid, wherever possible, significant changes to the noise environment, and to preserve residential amenity.

3.3.

This does not happen with windfarms. Government guidance adopts ETSU-R-97 as the applicable guidance in respect of the noise emissions from wind turbines. I think this is profoundly unsatisfactory, where the offset distance from turbines to houses is less than one kilometre. That is because Windfarms tend to be located in rural areas, where background noise levels tend to be low it follows that significant increases in noise levels will be more noticeable at affected residences.

It also follows that from the use of ETSU-R-97 that the use of the LA90, 10 minutes descriptor will tend to “take out” the worst effects from any reading. So a sudden noise event, lasting only a few seconds or minutes but being audible and tending, say to wake up the receptor (as we must now describe ourselves) will be “smoothed out” in the overall reading, even if it tends to pull the average somewhat upwards.

The use of LA90, 10 minutes ignores the nature of windfarm noise. I can make some attempt to describe it for the inquiry, but it is a series of sounds which envelop the listener, often making sleep impossible, and (when awake) make concentration very difficult. It is pervasive without being loud. It is effective enough to interrupt sleep, conversation, television and normal indoor and outdoor activities around the house.

It is important for the Inspector considering this specific application to understand that whilst we can happily sleep within 400 yards or so of the M6, both in the Birmingham area and just outside Carlisle, it is impossible to sleep at home, and I can absolutely assure the inspector that the modulating, pulsating beat and thump of turbines WILL be heard over the background low rumble of the motorway. I speak with conviction and knowledge on this matter having worked at Killington lake Service Station the first winter it opened in 1972/73 and slept in a caravan nearby.

3.4.

It is now two years since we have had any real communication with the wind farm developers or operators. Seemingly, once they are erected no one is interested in trying to remedy any of the issues that a badly placed wind farm can create. And most importantly, no one can determine what makes a wind farm badly placed until it is up and running. By then of course it is too late.

3.5.

Aerodynamic modulation (AM) is not fully understood. It exists, but there is no clear understanding as to what causes it. Wind Turbines create sound pressure waves some of which can be heard, but many of which can be felt in the body.

The applicants refer to AM in Para's 6.6.19 to 6.6.24. They also refer to the so called Salford Noise Report in 6.6.22. Following a recent Freedom of Information Act request the full body of the Salford Noise Report that was not covered in the published document is now available and is attached as Appendix C. It clearly shows that at that time there were 27 wind farms that had caused someone to contact their local environmental Health department about noise pollution. However the government decided to only concentrate on those sites that were reported as having Aerodynamic Modulation, or in our case Amplitude of Aerodynamic Modulation. As can now be seen our site, Deeping St Nicholas was identified as the third site in this report. Since then at least another 10 sites have been identified as having significant noise issues, and there is a current piece of research commissioned by DEFRA looking at how best these noise occurrences can be measured and monitored by Local Authorities. The presence of AM means that for instance when putting ear defenders on to work on a car with a defective alarm, the defenders blocked out the car alarm sound, but the turbine "noise" could be clearly heard and felt even with the defenders in place. Within our home the fabric of the house insulates against audible sounds but you can still sense the rhythm of the turbines. This is particularly noticeable when trying to relax or sleep. AM affects the ability of nearby residents to rest or enjoy the peace that is the amenity of their home.

3.6.

AM is not properly covered by ETSU-R-97, perhaps not surprisingly because it was not understood as an effect in 1997, and the guidance itself has never been revised since then. Our modulation can be as much as 10 to 15 dB(A) during episodes.

3.7.

I believe that there is a need to assess and potentially apply a correction to ETSU-R-97 if this measurement is to be effective in protecting the peace and quiet of the amenity that is people's homes. Much planning policy is directed towards that end

3.8.

As a result of our difficulties we were forced initially to find an alternative place to sleep. After spending many nights "sofa-surfing" we reached the conclusion in December 2006 that we had to do this in order to be able to work and live safely — with a normal amount of sleep.

3.9.

In May 2007 we finally took the very difficult decision to abandon our home as a place to live and we now live, in exile, in our “sleeping house” which is a rented property 5 miles away in Spalding itself.

3.10.

Because of our experiences we have been asked to many meetings across the UK in those areas where a wind farm development is proposed and we have given evidence at a number of public inquiries.

3.11.

Our house which would previously have been worth about £180,000K is now likely to have a value of just the land £35K to £50K. It would not be marketable as a home for people to live in any longer. In July 2008, a Valuation Tribunal acknowledged this and reduced our Council Tax Banding by one band, a fact that accepts that the erection of the wind farm has materially affected our ability to enjoy the amenity that was our home. The date of the decision was 17th July 2008, and the appropriate appeal numbers are: 2225475645/032C and 2525475651/032c

The judgement stated that: “It was apparent from the evidence submitted that the construction of the wind farm 930m away from the appeal dwellings had had a significant detrimental effect on the Appellants quiet enjoyment of their properties. The Tribunal therefore found that the nuisance caused by the wind farm was real and not imagined and it would have had some effect on the potential sale price of the appeal dwellings..” “In view of the forgoing, the appeals were allowed and the tribunal has decided to reduce the assessment of both appeal dwellings to Band A with effect from 21 st June 2006” .

3.12

As stated in 3.5 above, there are a growing number of windfarms experiencing noise and other problems. Sworn statements of two individuals so affected are attached as Appendix B and two others, Mr Brierley and Mr Williams wish, if agreeable to the Inspector, to present their own evidence orally.

4. Conclusions

In summary my experience and evidence demonstrates that:

1. The current state of scientific knowledge pertaining to the effect of wind turbines on the environment, with specific regard to protecting the quiet enjoyment of people’s properties is not sufficient for any developer at this time (January 2009) to able to confirm, absolutely,

that no neighbour of a windfarm will suffer in the same way as we have.

2. That the ability of the human body to detect the specific and unpleasant characteristic noises emitted by wind turbines is not just related to sounds that are audible but also to sounds that are felt by the body, and these can cause unpleasant and detrimental health effects along with sleep deprivation.
3. That this site, because of its rural nature, and the background noise of the M6 notwithstanding will notice the characteristic modulating sound that is wind turbine noise, as although the planning condition pertaining to ETSU-R-97 will be met, the modulation over background noise, particularly at night and during amenity hours will be sufficient to cause noticeable and intrusive noise pollution at all the identified nearby "receptors" whether they be financially advantaged, or disadvantaged by the proposed application.
4. I therefore recommend that in order to preserve the amenity of nearby residents that this application is refused.

Jane Davis, MA. (copyright)

Julian Davis BSc

APPENDIX A

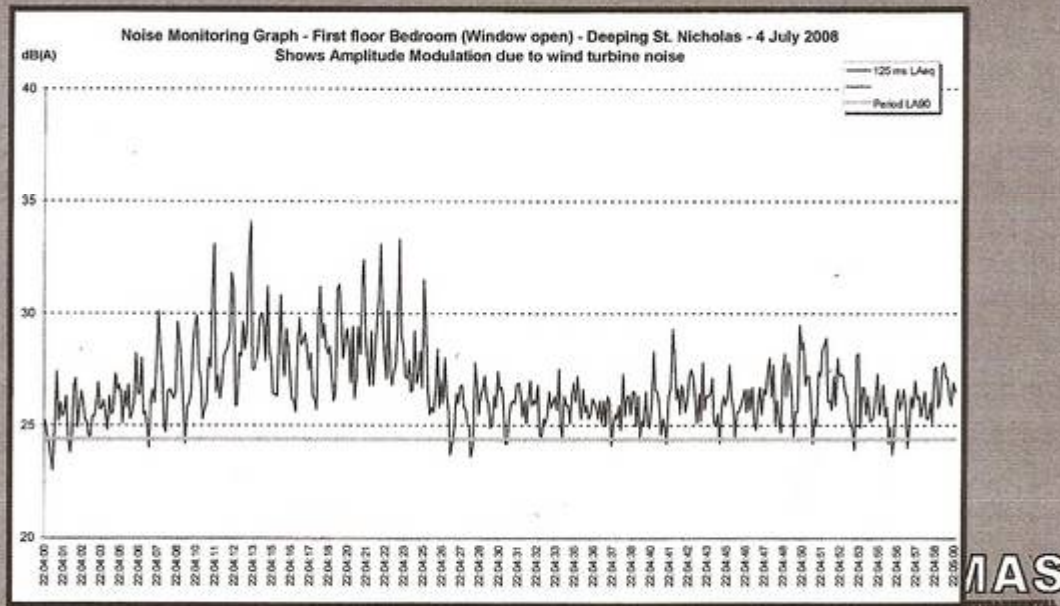
Wind Turbine Noise

GRAYS FARM DSN

1. Sound Pressure Wave Modulation recorded at Grays Farm
2. The unsuitability of the LA90 (10min) Descriptor for measuring turbine noise pollution
3. The failure of external background noise to mask turbine noise when experienced within a dwelling.

(1) Grays Farm, Deeping St Nicholas, 930m from the nearest turbine.
AM rises in modulation and also in level.

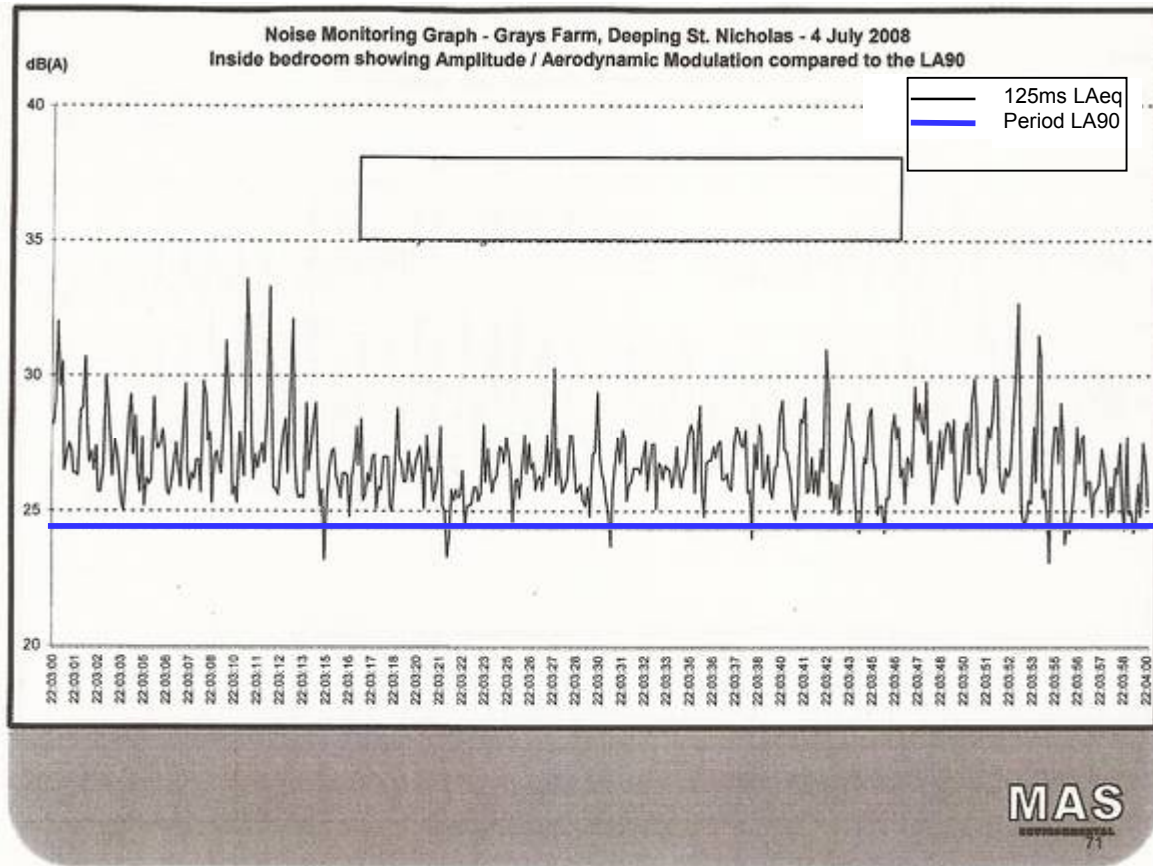
The lowest to the highest point exceeds 10dB just in one minute = considerable. Max variation for individual thump or whoosh is 8dB(A).



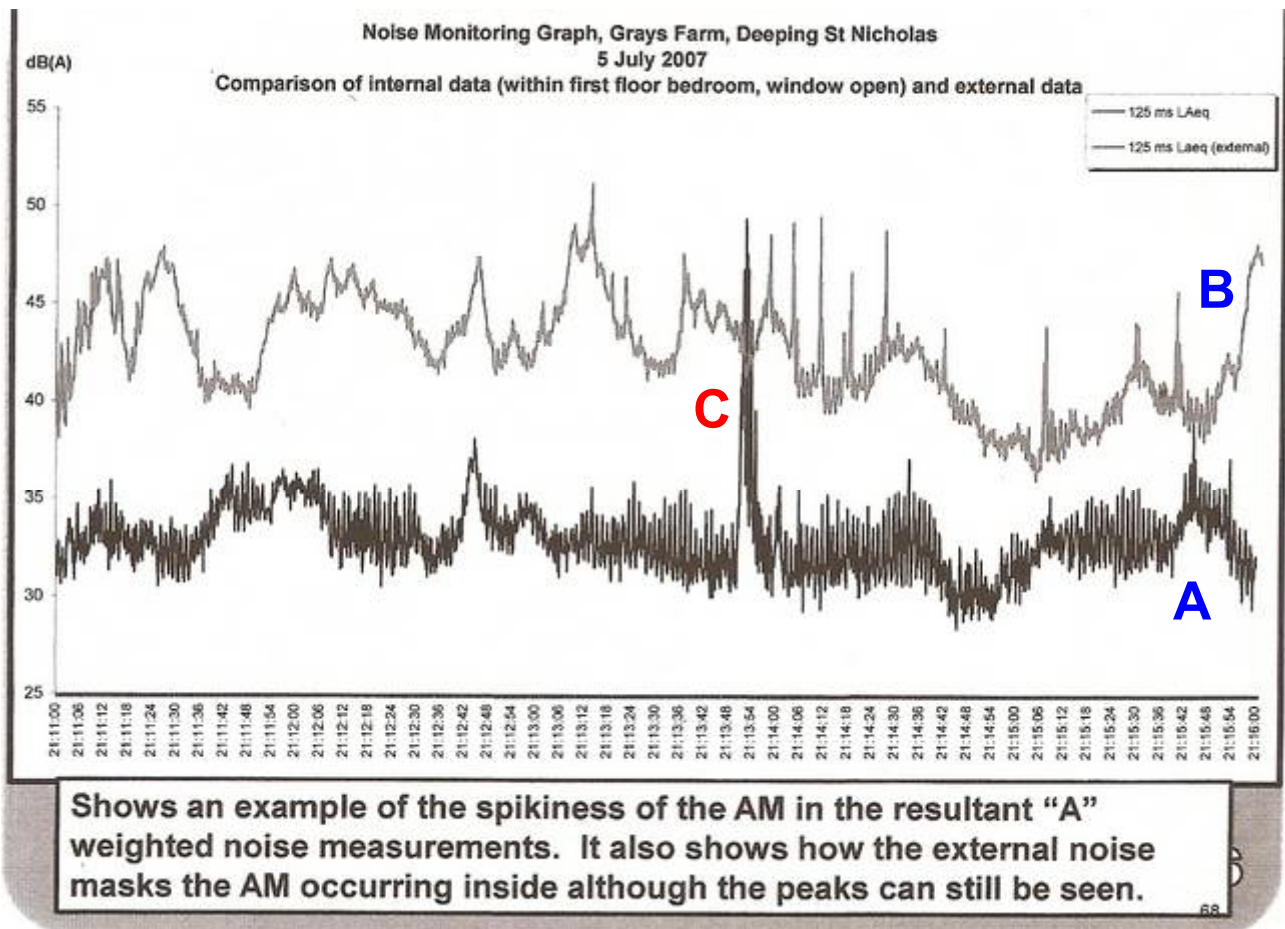
This slide illustrates the characteristic peak to trough trace of amplitude modulation recorded in the bedroom of our house in July of 2008. In terms of the severity of what we have suffered over the past two and a half years this level of modulation would rate as 6 on a scale of one to ten (where 1 is least and 10 is the worst)

The lowest to the highest point exceeds 10dB, and this is just in a period of 1 minute. The maximum variation for and individual thump or whoosh is 8dB (A).

Modulation generally occurs at a frequency of **one** beat per second.



This is an illustration of the failure of the descriptor LA90 (10min) used under the guidance given from ETSU-R-97. The peak to trough range of modulating sound pressure waves produced by modern large turbines is far greater than that from the small to medium size turbines on which ETSU-R-97 was based. Consequently the larger peak to trough variation changes the characteristics of the sound and hence it is more noticeable and intrusive. The LA90 (10min) descriptor does not reflect this and therefore a substantial decibel penalty (10dB (A) or more) would be warranted to reflect the nature, or characteristic of the sound.



This slide shows sound measured from the turbines inside and outside our house simultaneously. The lower trace (A) is the internal measurement and shows the spiky peak to trough modulation. The upper trace (B) is the outside measurement and generally only records the upper part of the modulation due to masking from external noise sources (background noise). This shows that while a limited amount of masking does occur externally, internally the full modulation is experienced. The structure of the house significantly reducing the effect of any external background noise indicating a significant contribution to the turbine noise from lower frequency ranges.

(Note, the spike at (C) is due to un-related internal noise)

Appendix B

Sworn Statements relating to nuisance from wind turbines by;

- i. Mr Steve Rashleigh**
- ii. Lynn Harlock**

PRECOGNITION BY STEVE RASHLEIGH

MONTREATHMONT PUBLIC INQUIRY

1. My name is Steve Rashleigh, my wife and I live at White House Barn, North Drove, Bicker Fen PE20 3BQ. Our home is on the Fens and has two and a half acres of land. Our family run a double glazing business.
2. During the summer Wind Prospect erected thirteen REpower 2mw wind turbines at Bicker Fen. From the beginning they were noisy. We complained and were told it was early days and it was only a temporary problem. When the remaining turbines were erected and it was operating properly there would not be a problem.
3. We waited but when the development was completed the noise problem was worse.
4. Our home is approximately 800m from the closest turbine. It is a barn conversation and has buildings on three sides. The noise seems to enter the courtyard and bounce round the buildings. The noise we experience sounds just like an old steam train.
5. The noise is almost constant as the noise we receive comes with the prevailing wind.
6. We were told that we would not notice the noise so much when it was windy. This is not the case, when it is windy the noise is very much worse. It is a thumping noise like an old steam train coming in.
7. During the day when we are moving around and the television is on, it is bearable. At night it is not. The thumping noise just goes on all night. Sometimes it is impossible for us to get to sleep.
8. We have done everything we can to try to kill the noise. We already had double glazing but, at our own expense, we installed 6mm secondary double glazing. We now have four layers of glass at our windows. This has reduced the noise a little but it is still unbearable at night. Unfortunately our bedroom windows face the turbines.

9. We have also spent £1000 and planted trees between us and the turbines but of course it will be some time before we know whether they will have an effect on the level of the noise.
10. We wrote to Wind Prospect and asked them whether they would pay for these trees but they did not reply.
11. We have spent a considerable sum to try and reduce the noise from the windfarm and have received no help whatsoever from the developers/operator.
12. In contrast, when E.On built a substation near to other properties to take the power from the turbines to the grid they provided eight neighbouring properties with double glazing free of charge – We know this is correct because our company installed the double glazing.
13. Although the noise is the main problem we have with these turbines we also suffer from shadow flicker.
14. We can suffer shadow flicker for over an hour. It is very difficult to cope with this. We close the curtains but you can still see the shadows flickering. We are particularly concerned about the shadow flicker as our son is epileptic. He is not living at home at the moment but we have to be very careful when he visits.
15. We have complained to Trevor Gait of Fenland Wind Farms/Wind Prospect but he has done nothing.
16. We have complained repeatedly to Boston Borough Council. They have been reluctant to act but at last we understand that they are now obliging Fenland Wind Farms to commission a noise investigation. This is due to commence on 6th December 2008. We cannot understand why they are allowing the turbine developer to undertake this survey. We believe this should have been commissioned by the Council and undertaken by independent noise consultants.
17. At the moment life is unbearable and we are worried that in the event we ever wished to sell our home it would not be possible to find a buyer.

18. We are very disappointed with the lack of concern shown by Wind Prospect/Fenland Wind Farms and hope that between them and Boston Borough Council something will be done to reduce the noise and shadow flicker and improve the quality of our lives.

19. In view of the problems we have experienced, we wish to warn people of what can happen and at the same time object to the Montreathmont development. We were assured that noise would not be a problem and this has not been the case. This Company is obviously unable to ensure that noise is not a problem with their turbines and we do not believe that they should be allowed to erect further turbines until they have resolved the problems at their existing operating developments.

This statement is made by Lynn Harlock, Newtons Farm, Chatteris Road, Warboys, Huntingdon, Cambs. PE28 2UH. Tel: 01354 692301

Twelve, 130 metre turbines have been erected to the front and the side of our cottage. The first we knew about these turbines was when the diggers arrived to start excavating the site.

Two turbines are only 700 metres from our home. One of these is directly in front and one is to the side of our cottage.

We have done such a lot to our home. It was a wreck when we bought it, we had to shovel the rubbish out. We renovated the cottage and made the garden from a field. Now it is really lovely.

We never intended to sell, but would we be able to sell it now? We bought it from the Council and yet they have permitted these turbines to be built on their land.

These turbines cause us three main problems: Noise, shadow flicker/strobing and TV reception interference.

NOISE

Noise is a particular problem when there is a westerly, moderate wind. We get these winds frequently right through November, December, January, February and March. However, this noise can occur at any time when the wind comes from one direction and reaches a certain speed. We know that when the turbines have their backs to us and the wind picks up, we are in for a noisy night.

Our bungalow faces straight on to the turbines and our bedroom is in the front of the bungalow. However, the noise is present in all the bedrooms and rooms, including those at the back.

The turbines, whoosh, thud and bang. The noise disturbs your sleep. At night when you put your head down, it is like an empty bulk load lorry going along a bumpy road. It is as if there is a piece of metal in the back of the lorry and this will thud through the house all night.

Once you have been awaked by the turbines you just lie there listening to them and although you are tired you cannot get back to sleep. There is a thud, thud, thud; it is like a constant vibration. We are tired but we can't sleep we just lie there listening to the turbines.

If it is a warm night and you open the window, it sounds as if the noise is in our bedroom.

The noise is present in the bedrooms both to the front and back of our home. The noise vibrates and runs through your bed, through your pillow and through your head. Even if you put a pillow over your head, you can still hear them.

Often the noise sounds like a car left running on the front drive. When the wind dies and returns, it sounds like vehicles are coming and going. It sounds just like vehicles are turning up on your drive. You are up and down all night, looking out of the window to see who is about. It is very disturbing.

During the day when you are active the noise is bearable. However, in the evening when the wind is in one position, if we are sitting in our lounge we have to have the TV turned up. The noise is monotonous and annoying and we have to keep the windows shut even if it is warm.

The noise can be heard above the sound of the television. Sometimes we have to turn the TV down to reassure ourselves that the noise is just the turbines, because you worry that something else might be making the noise.

SHADOW FLICKER

On clear days, at sunset we also get severe light flickering/strobing in our bungalow. This is very disturbing. The flickering affects the rooms at the front and the conservatory and the kitchen. We have videoed the flickering in our bedroom and living room.

Even with the blinds closed we cannot keep out the flickering.

Our youngest son came out of hospital last year and was at home for three weeks and he could not sit in our living room and watch TV when the sun was setting as the flicker just passes right through the room.

If we have visitors we have to shut the blinds, but still we cannot shut out the shadow flicker. We have heavy lined curtains in the lounge but even if we close them it still looks as if a car is flashing its lights outside the window.

When the light is flickering, you have to move out of the worst affected rooms. It makes you feel very disorientated and it is impossible to relax.

The flickering also makes it appear that there is someone going by your window because there is this movement going on all the time.

The single turbine erected by Wind Prospect at Whitemoor Prison also causes disturbing shadow flicker. However, in response to complaints from the prison, the turbine does not operate when shadow flicker occurs. Our home suffers shadow flicker from two turbines and yet nothing has been done for us, despite repeated complaints to the Wind Prospect representative, Trevor Gaits.

Before these turbines were erected, I spoke to the owner, Sylvester Bouffont, in my house. I pointed to the sun and warned him that the turbines were too close and there would be shadow flicker. He assured me that the sun would not flicker the light as far as our cottage. He also assured me there would be no noise problems.

INTERFERENCE WITH TELEVISION RECEPTION

When the turbines were erected the television was blocked. We had no television reception. As a result we were given Freesat. Previously we had the usual television channels and also Freeview on which we were able to obtain a number of extra channels including the Sky Sports channel. However, the Sky Sports channel is not available to us on Freesat. We would have to pay for this if we wanted this channel restored.

COMPLAINTS MADE

We have complained repeatedly to our local Parish Council, Huntingdon District Council, Cambridgeshire County Council, the Environmental Health Office and direct to the Developer's representative, Trevor Gaits of Wind Prospect. We have not found any of these bodies very helpful. We believe their lack of interest may be explained by the complicated business relationships that exist between the various individuals and parties.

Cambridgeshire County Council owns the land on which 9 of the Warboys' turbines are sited. They receive a substantial income from these turbines. The other three turbines are sited on farmed land owned by three private individuals, Messrs. Bond, King and David England (David England is also the planning councillor for Warboys Parish Council and he sub-lets additional land from a Cambridgeshire County Council lessee who is our neighbour).

We have objected repeatedly to the Environmental Health Office. We have been told that Toby Lewis, the EH Officer for our area, came out once one night to investigate the noise. We were going on holiday, so he said he would come out at about mid-night. On the night he visited the site the wind was not coming from the right direction and there was no noise. He then reported that there was no problem with noise.

We do not believe that the EHO have dealt with our complaint seriously, as it is not possible for them to assess the noise nuisance if their officer only visits when the turbines are not emitting the noise about which we complain.

We are concerned that the EHO may feel reluctant to act they are part of Huntingdon District Council who in turn is very closely connected with the landowners, Cambridgeshire County Council.

Our home is a semi-bungalow. Our neighbour does not object to the turbines. However, he leases land from Cambridgeshire County Council and sublets this land to David England who has one of the turbines on another piece of land which he owns. As mentioned above, David England is the Councillor with responsibility for planning at Warboys Parish Council.

Our home is very nearly surrounded by turbines, not just those that are creating problems for our home. Wind turbine developments in our area include:

- 12 turbines at Warboys - in front of our bungalow.
- 8 turbines at Grassmore Bank c6 miles away, which are very visible from the garden.
- 5 turbines in the Doddington/March area c8 miles away, visible from our kitchen window.
- 1 turbine at Whitemoor Prison, visible from our kitchen window on a clear day.
- More turbines at the next village which are not visible from our home.
- A further Wind Prospect development has been approved at Coldham c15 miles away

We are concerned that cabling for the Warboys' turbines has been laid in such a way that it will facilitate further wind turbine developments in our area.

The best mornings are foggy mornings. You wake up and you can't see the turbines, then the fog lifts and they are still there.

I believe that these problems make our house unsaleable. No one would want to live here.

Signed: Lynn Harlock

APPENDIX C

Renewable Energy Foundation

Summary of Freedom of Information Act application relating to data collected by the University of Salford under contract to the Department of Business, Enterprise and Regulatory Reform: Research into aerodynamic modulation of wind turbine noise URN 07/1235

FOI application upheld by the Commissioner on 8th December 2008

[see hard copy of evidence for this report]