
# 3 The Objections

## Sections 3.1 to 3.7

# SECTION 3
# THE OBJECTIONS

# This file contains sections 3.1 to 3.7

## 3.1 OBJECTION - THE SITE IS NOT SUITABLE FOR A WIND FARM

The site is not suitable for the following reasons.

- ? It is surrounded by dwellings at 1km or less.
- ? As a consequence four village communities will be at risk of noise nuisance, loss of residential amenity and shadow effects.
- ? The proposed wind farm would have a serious detrimental affect on the Heritage of the area.
- ? The proposed wind farm would have a significant negative impact on the landscape.
- ? The wind resource is poor.
- ? In comparison with other wind farm sites this is a highly populated area
- ? The application is contrary to the Selby Charter aspiration of creating a "Golden Triangle" between Selby, Leeds and York.
- ? The project would have a serious detrimental affect on the economy of the area.

3.1.1 Many of the objections listed above have a separate section in this document. In this section we compare this proposed site with six other wind farm sites. The first two sites in our comparison are Crystal Rig and Ardrossan which are often referenced by the wind energy industry.

3.1.2 We then look at Knabs Ridge near to Harrogate and Chelker near to Skipton. The first of these is operational and the second has been turned down by South Craven Area.

3.1.3 The final two sites that we examine and compare with Woodlane are Lissett and Deeping St Nicholas. These sites are closer in character to Woodlane but we will show that these two sites have fewer homes close to turbines and even then there are serious noise problems at one of them. The noise problems were unforeseen and have not been resolved. These two wind farms illustrate the danger inherent in the application for Woodlane wind farm.

3.1.4 Finally we will review the Woodlane site and show that the application should be rejected because of the excessive number of risks that it would create for residents living in the area because of proximity to turbines.

### Crystal Rig

3.1.5 This wind farm is in an area of moorland south of Edinburgh in the Scottish Borders. It is 7 miles (11 km) northwest of Duns and 7½ miles (12 km) south of Dunbar. Commissioned in August 2003, the farm comprised 20 turbines, each capable of generating up to 2.5 megawatts, giving a maximum possible output of 50 MW, which made this Britain's most powerful wind farm when it was formally opened in August 2004. The diameter of the blades is 80m and each turbine is mounted on a 60m high tower. The farm is run from an automated on-site control building. In July 2005, consent was given to extend the wind farm to the west by adding a further 52 turbines, which will take the total number of turbines to 72.

3.1.6 This site bears no resemblance whatsoever to the Woodlane site. The first map shows Crystal Rig with all homes in the surrounding area highlighted in blue. The centre of the wind farm is shown by the petal. In the second map we have superimposed the area around Woodlane out as far as Sherburn and Selby to compare it with the Crystal Rig site. The map has been superimposed at the same scale with the centre of Woodlane at the same point as that for Crystal Rig. Residential areas are highlighted in red.


Fig. 3.3.1
Crystal Rig wind farm and homes in the area around it.

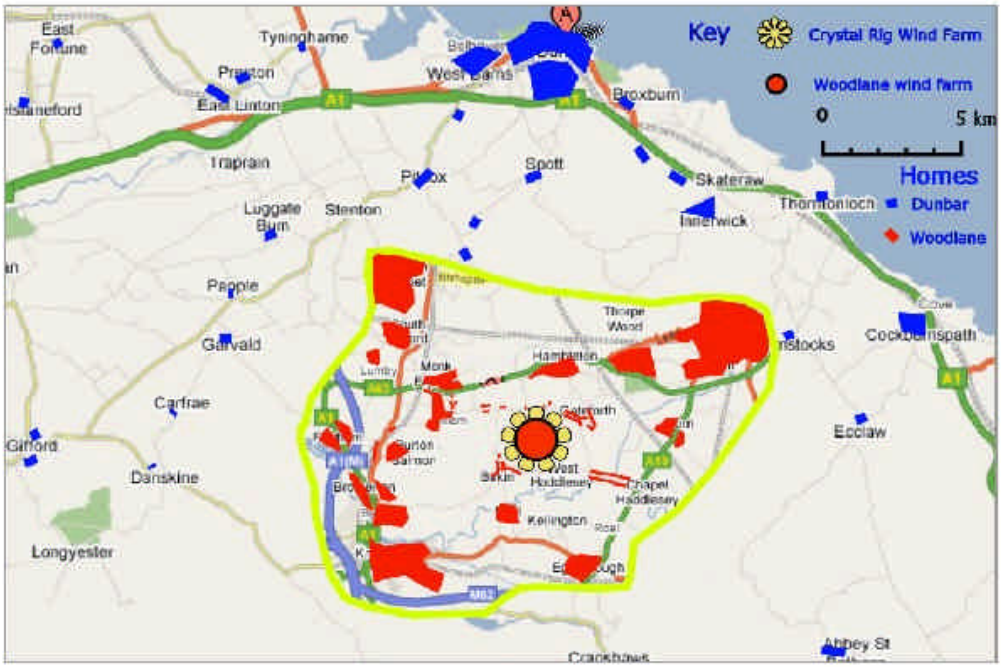


Fig. 3.1.2
Woodlane wind farm superimposed at the same scale.

3.1.7 There are 100,000 people living in the area enclosed by the yellow line around Woodlane. There are only 10,000 people in the whole of the map for Crystal Rig. This shows that Woodlane is being fitted into a residential area versus remote moor land for Crystal Rig.

3.1.8 We have investigated this particular site because it is one of the main sites used by the wind industry to show that there is no adverse impact on house prices caused by close proximity to a wind farm. Since the majority of house transactions studied took place in Dunbar, which is 12 km away, it is not surprising that no adverse effect was detected. In the case of Woodlane there are homes within 1 km of turbines and valuations have indicated that some homes will fall by 20%. We are aware this is not a planning issue but observe that there have been instances of Council Tax bands being reduced due to proximity of turbines.

3.1.9 Crystal Rig wind farm hit the headlines in April 2005 when a blade sheared off one of the turbines. For further information about accidents involving failure of wind turbine blades see section 3.12.

## Ardrossan Wind farm

3.1.10 References to this wind farm are often accompanied by statements about the turbines being **"**silent workhorses". Having investigated, we have no reason to think that this would not be the case. Once again the turbines are located well away from any dwellings. The nearest dwellings are in the town of Ardrossan, the turbines are high on the hills above the town. There is a busy by-pass between the town and the wind farm.

3.1.11 Our Google Earth picture of the wind farm shows the remote upland location and the network of new access roads. The turbines are marked by red circles. The nearest house in Ardrossan is over 2.3km away from the nearest turbine and the site is down wind from the town. This is a good location to ensure minimal risk of noise disturbance.

Fig 3.1.3
Ardrossan Wind Farm

## Knabs Ridge

3.1.12 This operational windfarm is near to Harrogate, on a hill a short distance from the Menwith Hill radar domes. The wind farm became operational in the summer of 2008 with 8 x 2 megawatt (MW) wind turbines. Planning permission was granted by the Planning Inspectorate in September 2005 following a two week public inquiry.

3.1.13 The 2MW turbines, each have a 58m tower with a 70m diameter rotor. While the turbines are smaller than those proposed for Woodlane they are still visible from many miles away.

3.1.14 This wind farm is close to a camp site which used to be popular with visitors to the Yorkshire Dales and to Harrogate. The following shows the extent to which this business has been damaged by proximity of the wind farm:
*'In 2005 NPower were granted permission to build an 8 turbine wind farm at Knabs Ridge near Harrogate. The Appeal Planning Inspector's report quoted:*
*"There is no good reason to believe that the presence of the wind farm would put off visitors to the area to the extent that the local tourism industry or related businesses would be adversely affected".*

*There is a caravan park, High Moor Park Farm, within 430 m. of that wind farm. This park has traded for some 28 years showing an average of less than 5% of vacant pitches annually. In the trade the average figure is 10% of vacant pitches annually. The official opening of Knabs Ridge wind farm was on 11th November, 2008. High Moor Park Farm now has 25% of its pitches vacant yet other parks in the area, which are unaffected by turbines, have maintained their customer levels.*

*High Moor Park Farm has lost £91,000 in pitch fees since November 2008 as well as the loss of trading on site. Since the construction of the wind farm began about two years ago there has been a loss of £400,000 in caravan sales. All these figures are based on the historical turn-over at this caravan park.*

*When customers move their static caravans, this is an expensive exercise and not done lightly or without good reason. This park has information to prove that the adverse impact of the turbines is given as the reason for the migration of so many of their customers.*

*If this figure is replicated in the next six months, they will be looking at a half empty park within a year of the 8 turbines being operational". Source EPAW*

## Chelker Reservoir

3.1.15 This application was rejected in 2008. The application was for 2x125 metre turbines to replace 4 existing smaller turbines near to the reservoir on Skipton Road on the moors above Addingham. The application was rejected because:

- It would have a detrimental effect on the historic landscape and on two grade1 Listed Buildings.

- The two 125metre high turbines would have a significant visual impact
- It would have a material detrimental impact on the residential amenity of occupiers of nearby properties.

3.1.16 This case study is of interest because of the behaviour of the Applicant. The 4 smaller turbines were removed from service over a year ago and lie in a very unsightly condition around the site in partly disassembled form. This is neither environmentally friendly nor considerate de-commissioning.

## Lissett

3.1.17 This site is now complete and either fully operational or going though the final stages of commissioning. The site comprises 12 x 2.5MW turbines of the same size as have been proposed for Woodlane. The site is near to Bridlington and has been visited by many members of SWL. The most common reactions to seeing the site are

- Amazement at the size of the turbines
- Visual impact from Beverly by-pass which is 20km away.
- Visual impact from the coast road between Scarborough and Bridlington. The turbines are prominent from 15km.

3.1.18 The nearest dwelling to a wind turbine is 1km away and this has clear visibility of the wind farm site and all of the turbines. After that the next nearest dwellings, except for the farm which has financial involvement in the wind farm, are in Lissett village which is 1.4km away from the nearest turbine. To the West of Lissett village there is a small wood of high deciduous trees and few houses in Lissett village are able to see any of the turbines. This is quite unlike Woodlane, where there are many homes closer than 1km, many of which have a direct view of proposed turbines. Where there is woodland it is further away and the turbines will be seen above the trees.

## Deeping St Nicholas

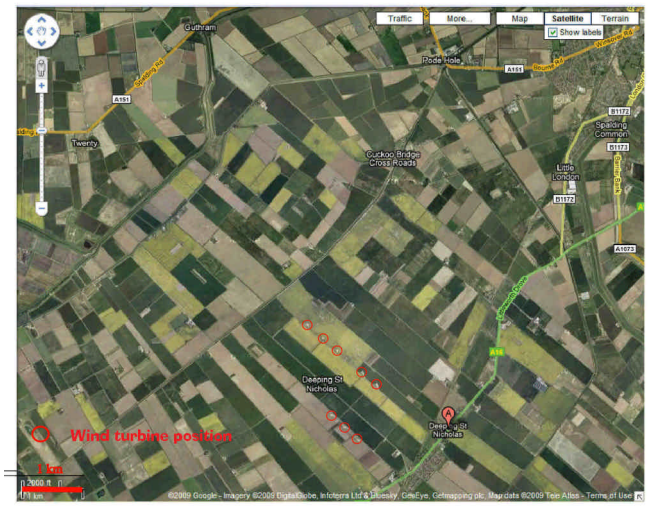


Fig. 3.1.4
Deeping St Nicholas Wind farm
– there are very few homes close to the site.

3.1.19 The Deeping St Nicholas Wind Farm in South Lincolnshire consists of 8 turbines located on land at Vine House Farm, and Worths Farm. The turbines are REpower MM82, and have an overall tip height of 100m. The nearest dwellings to the site are in Deeping St Nicholas village which is to the south east of the site.

3.1.20 Our Google satellite picture, with the turbines shown in red circles, shows that there are no other dwellings close to the site. It is about 3km to Cuckoo Bridge Crossroads. The road through Deeping St Nicholas is about 1.25km from the nearest turbine and this has the nearest concentration of homes.

3.1.21 However this site is where the Davis family live, they are 930metres from the nearest turbine and have suffered serious noise problems in a well publicised and on-running case. The noise problems have been attributed to "amplitude modulation" which was not foreseen by the developer. There are only 8 turbines and the problem of noise is so serious that the family have vacated their home.

### Woodlane Wind Farm Site

3.1.22 The most striking comparison is how many homes there are very close to a turbine and that this is the case on all four sides of the site. The result is that:

- There are 33 dwellings within 930 metres of a turbine – the distance at which the smaller turbines caused serious noise problems in Deeping St Nicholas.
- Woodlane wind farm would have homes with as many as 13 turbines within 2km – the distance within which the French Medical Academy recommends there should be no turbines, and the distance at which a single turbine is described as a prominent feature in Scotland's Planning Guide PAN45.
- Birkin village – the majority of the village will have 9 turbines within 2km, the rest will have no fewer than 7 turbines.
- Gateforth village – the eastern part of the village will have 7 turbines within 2 km, while those along Hillam Road will have between 7 and 10 turbines within 2km.
- Gateforth Hall – Grade 2* listed will have 5 turbines within 2km
- On Hillam Common lane two homes will have 13 turbines within 2 km
- Other homes along Hillam Common Lane will have 9 or more within 2 km
- Woodlane is a Zone 3 flood risk area – see section 3.10

- The predicted noise contours for the site show levels all around the site reach to or are very close to statutory noise limits – see section 3.4

- The area around the site, especially the circular tour on rural roads is popular for recreational use by people living in all four villages, turbines are proposed to be as close as 300 metres to the road – see section 3.7

- Shadow from turbines will affect dwellings all around the site – see section 3.11

- The site is bounded on two sides by Green Belt – see section 3.6

- The site is in close proximity to listed buildings – see section 3.3

## Conclusion

**3.1.23 The site is wholly unsuitable for a wind farm and the application should be rejected.**

## 3.2 OBJECTION – LANDSCAPE AND VISUAL IMPACT

- The ES states "*perhaps up to 800 metres or thereabouts from the proposed turbines, the landscape type would be changed into a wind farm landscape, where wind turbines would be the principal determining element of landscape character".*
- Gateforth, Birkin and parts of West Haddlesey, plus homes along Hillam Common Lane are within "800 metres or thereabouts"
- Best practise not followed in the LVIA
- Significant adverse visual impacts up to 6km
- Application does not conform to national policies PPG2, PPS7 and PPS22; regional policies ENV10: local policies DL1, ENV6 and GB4: Selby LDF Options and Issues Report, Objective 12
- Application does not conform to the Selby Renaissance Charter

### Introduction

3.2.1 The objections to the Landscape and Visual Impact Assessment (LVIA) of the proposal are structured by reference to the following:

- Aims of National, Regional and Local Policy regarding landscape effects and visual impact of proposed developments.
- Policy context – an analysis of compliance with National, Regional and Local Policies.
- Best Practice – a critique of the methodology employed in the LVIA for the proposed Woodlane wind farm.

3.2.2 The determination of an onshore wind farm planning application depends upon an assessment of the balance between two potentially conflicting sets of planning policies. On the one hand there are policies promoting renewable energy production and on the other there are numerous policies, at national, regional and local level, protecting the countryside and visual amenity.

3.2.3 The need to produce renewable energy receives a great deal of political, public and media interest. There is an inherent danger that decision makers are encouraged to override sound and valid planning policies so as not to be seen to be standing in the way of the perceived imperative to support renewable energy schemes whatever the adverse cost.

3.2.4 The ES attempts to argue that policies which have been enforced for decades to protect the countryside and its landscapes should count for very little when set against the demands for renewable energy. This is a fallacious argument and the protection of the countryside is a key issue which must be given great weight in determining this application.

## Planning Aims

### *National Aims*

*PPS7- Sustainable Development in Rural Areas*

3.2.5 Guidance relating to the protection of rural landscapes is set out in PPS 7. The guidance confirms that the Government's objectives include *"continued protection of the open countryside for the benefit of all."*

3.2.6 Under Key Principles (iv), the Policy Statement goes on to explain that *"the Government's overall aim is to protect the countryside for the sake of its intrinsic character and beauty, the diversity of its landscapes, heritage and wildlife, the wealth of its natural resources and so it may be enjoyed by all"* and in Objective (i) " *To raise the quality of life and the environment in rural areas."*

3.2.7 Under The Countryside (Para 15), the PPS states that *"planning authorities should… ensure that the character and quality of the wider countryside is protected and, where possible, enhanced".*

3.2.8 In Para 16 it recognises that when determining planning applications for development in the countryside planning authorities should provide for the sensitive exploitation of renewable energy sources in accordance with the policies set out in PPS 22.

*PPS 22*

3.2.9 PPS 22 is very clear in Key Principle (i) that *"Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and* ***environmental,*** *economic, and* ***social impacts*** *can be addressed satisfactorily."*

3.2.10 It also recognises in Para.20 that of all renewable technologies, wind turbines are likely to have the greatest visual and landscape effects.

### *Regional Aims*

3.2.11 The Yorkshire and Humber Regional Plan in Policy ENV10 states that the Region will ***safeguard and enhance*** landscapes that contribute to the distinctive character of Yorkshire and the Humber.

### *Local aims*

3.2.12 The Selby District Local Plan in Chapter 2 promotes sustainable development and the protection and enhancement of environmental quality.

## National, Regional and Local Policy Context

***National Policy***

3.2.13

| National Policy | Policy / Guidance |
|---|---|
| PPS7:<br>Objective (i) | *"The promotion of:*<br>*"Continued protection of the open countryside for the benefit of all, with the highest level of protection for our most valued landscapes and environmental resources."* |
| Key Principle (v) | *"Conserve specific features and sites of landscape, wildlife and historic or architectural value, in accordance with statutory designations."* |
| paragraph 16 | *"When? determining planning applications for development in the countryside, local planning authorities should:*<br>*(v) conserve specific features and sites of landscape, wildlife and historic or architectural value, in accordance with statutory designations"* |
| PPS22:<br>paragraph 19 | *"The landscape and visual effects of particular renewable energy developments will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development. Some of these effects may be minimised through appropriate siting, design and landscaping schemes, depending on the size and type of development proposed? ."* |
| PPS2:<br>paragraph 3.15 | *"The visual amenities of the Green Belt should not be injured by proposals for development within or conspicuous from the Green Belt which, although they would not prejudice the purposes of including land in Green Belt, might be visually detrimental by reason of their siting, materials or design."* |
| PPS22:<br>paragraph 14 | *"The potential impact on designated areas of renewable energy projects close to their boundaries will be a material consideration to be taken into account in determining planning applications."* |

*Conclusions*

3.2.14 The objective of PPS7, ***"To raise the quality of life and the environment in rural areas through the promotion of: "Continued protection of the open countryside for the benefit of all….."*** is not satisfied by the Applicant. The quality of life and of the environment would be lowered as a result of this application because current open countryside will be industrialised by the proposed development.

3.2.15 The Key Principle of PPS22, "… *environmental, economic, and social impacts can be addressed satisfactorily",* in particular, paragraph 19, *"The landscape and visual effects of particular renewable energy developments will vary on a case by case basis according to the type of development, its location and the landscape setting of the proposed development. Some of these effects may be minimised through appropriate siting, design and landscaping schemes, depending on the size and type of development proposed*? *."* is not adequately addressed in by the Applicant.

3.2.16 The requirements of PPS2: paragraph 3.15 are not satisfied by the proposals. It is clear that the *"visual amenities of the Green Belt will be injured by proposals for development conspicuous from the Green Belt*" which *"might be visually detrimental by reason of their siting…"* And furthermore

3.2.17 PPS22: paragraph 14 requires that such injury *"will be a material consideration to be taken into account in determining planning applications".*

***Regional Policy***

3.2.18

| **Regional Policy** | **Policy / Guidance** |
|---|---|
| Yorkshire and Humber Plan Policy ENV10: Landscape | *Plans, strategies, investment decisions and programmes should* ***safeguard*** *and* ***enhance*** *the following landscapes and related assets of regional, sub-regional and local importance:*<br>*D) Degraded rural landscapes, especially in parts of the Vale of York and Humberhead Levels* |

*Conclusions*

3.2.19 Policy ENV10: Landscape is not satisfied by the Applicant. The requirement is to ***"safeguard and enhance the following landscapes and related assets of regional, sub-regional and local importance:***
*D) Degraded rural landscapes, especially in parts of the Vale of York and Humberhead Levels"*

The Applicant has repeatedly described the area as degraded. Part 7 of the ES states ***"The turbines would be seen from areas close to the site in the context of an intensely cultivated landscape already influenced by large scale energy production, industrial activity and the M62 motorway to the south."***

The landscape in this area will neither be safeguarded nor enhanced and the proposal is therefore in conflict with Policy ENV10.

3.2.20 Policy ENV5 has Landscape and Visual Impact implications. The right to equitability in allocation of renewable energy generation capacity targets is established in several Local Public Enquiry rulings. Selby District Council has already exceeded its 2010 target by so much that it is already close to its 2021 target.

To put this in perspective, Selby District will generate more renewable energy than the target for the whole of North Yorkshire without any of the turbines currently in planning being built. If the Woodlane application is not rejected, the result would be inequitable and the energy and environmental policies will be in conflict giving rise to over-provision of renewable energy concomitant with a reduction in the quality of life of local citizens.

***Local Policy***

3.2.21

| **Local Policy** | **Policy / Guidance** |
|---|---|
| Selby District Local Plan: Policy DL1 | *"Development in the countryside, outside the Green Belt and development limits, will only be permitted where the proposal complies with all other relevant policies and the proposal:*<br>*1) Would be appropriate in a rural area*<br>*Where development is considered appropriate, it must be located and designed so as not to have a significant adverse effect on residential amenity or the character and appearance of an area and must not harm acknowledged nature conservation interests."* |
| Policy ENV6 | *"proposals for the development of renewable energy will be permitted provided that:*<br>*"1) The scheme will not have a significant adverse effect on the immediate and wider landscape"* |
| Selby Renaissance Charter Embracing Energy Futures Key Points | ? *"Work with the (local) power stations to address their environmental impact through co-firing and the use of waste heat and CO2*<br>? *Research and Development of sustainable technologies and eco-industries*<br>? *Sustainable new development through renewable energy such as community owned wind power- Rusholme, solar power & biomass heating."* |
| Selby LDF Options and Issues Report 2006: Objective 12 | *"To protect and enhance sensitive natural habitats and the wider countryside for its landscape, amenity, bio- diversity, recreation potential and natural resources"* |
| Selby District Local Plan: Policy GB4 | *"proposals for development in the Green Belt, or which are conspicuous from an area of Green Belt, will only be permitted where the scale, location, materials and design of any building or structure, or the laying out and use of land, would not detract from the open character and visual amenity of the Green Belt, or the form and character of any settlement within it."* |

*Conclusions*

3.2.22 Selby District Local Plan: Policy DL1 is not satisfied by the Applicant. The scheme has not been ***"located and designed so as not to have a significant adverse effect on residential amenity or the character and appearance of the area".***

3.2.23 Selby District Local Plan: Policy ENV6 is not satisfied by the Applicant. The presumption of planning permission provides that a ***"scheme will not have a significant adverse effect on the immediate and wider landscape."*** Where a scheme has significant impact there is a presumption of refusal.

3.2.24 Chapter 7 of the Applicants ES states: *"Significant landscape and visual effects will be localised as a result of the flat topography and woodland cover in the area".*

It also states that *"Significant visual effects are limited to views from settlements up to a 5-6 km radius of the proposed wind farm. These comprise localised parts of Birkin, Gateforth, West Haddlesey, Chapel Haddlesey, Kellington, Beal, Eggborough, Hillam, Monk Fryston, Hambleton, Thorpe Willoughby, Burn, Burton Salmon, South Milford, Brayton, and Sherburn in Elmet".*

It furthermore concludes (7.27.1) that *"The introduction of relatively large vertical features would represent a substantial change in the landscape character of the site and its immediate context. The associated infrastructure of access tracks and substation building will lead to further change in landscape character. Within the wind farm and in close proximity to the proposed turbines, perhaps up to 800 metres or thereabouts from the proposed turbines, the landscape type would be changed into a wind farm landscape, where the wind turbines would be the principal determining element of landscape character. Beyond this range the wind farm would give rise to a local characterising influence on landscape character. Given a landscape quality of generally medium to low the effect of the proposed wind farm on the landscape character and quality of this landscape type would potentially be between a major and major / moderate significant effect within a 2.5-3km radius".*

**A significant adverse effect on the immediate and wider landscape is confirmed in the application which should, consequently, be refused.**

## Best Practice – Critique Of The LVIA for the Proposed Woodlane Windfarm.

3.2.25 We review how closely the Applicant has adhered to guidance in Best Practice for Landscape and Visual Impact Assessment Second Edition (GLVIA), the Visual Assessment of Windfarms: Best Practice 2002 (VAW) and the Landscape Character Assessment Guidance for England and Scotland 2002 (LCAG).

***Photomontages***

3.2.26 At point 7.5 of the VAW it states, based on extensive professional visits to sites and comparing the reality of the view to that presented in the photomontages that:

- *"The limitation of photomontage should be recognised and acknowledged, especially a tendency for photomontage to consistently underestimate the actual appearance of a windfarm in the landscape"*
- *"A full image size of A4 or even A3 for single frame pictures, giving an image height of approximately 20cm, is required to give a realistic impression of reality."*

3.2.27 The ES also in 7.10 says that the photomontages follow the recommendations of the latest SNH guidelines - Visual Representation of Windfarms, 2006 in respect of the 300mm viewing distance. This is again being circumspect as the guidelines say that a viewing distance of 300-500m is acceptable although 400-500mm is recommended. So the photomontages are on the lower edge of acceptability and will underestimate the actual visual impact.

3.2.28 The photomontages provided in support of the LVIA in Section 3 do not appear to be presented in accordance with the best practice outlined in the VAW. The Applicant claims that the photomontages which they present are "worst case scenario".

***Landscape Character***

3.2.29 This is described in the GLVIA as *"The distinct and recognisable patterns of elements that occur consistently in a particular type of countryside and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation and human settlement. It creates the particular sense of a place"*

3.2.30 Point 2,23 of the GLVIA states that *"It is ....necessary to identify the landscape components that are valued by the community as a whole, why and how they are valued and, where possible, the people to whom they are valuable- that is 'what matters and why'."*

3.2.31 At 6.27 of the LCAG it states that *"Writing a good description of landscape character is a skilled job. The description should draw on the information recorded during the field survey but may have to generalise from this, as well as being more complete and polished in presentation. The aim is to describe the overall character of the landscape, with reference to geology, landform, land cover, land use, settlement and enclosures, and to draw out the way that these factors interact together and are perceived.* ***It can be helpful to imagine that you are describing the landscape to someone who cannot see it.***"

3.2.33 The landscape within which the turbines are proposed is described at 7.27.1 of the LVIA describing it as an area *"influenced by large scale energy production, industrial activity and the M62 motorway".* Photomontage pictures in support of this are shown at 1-9 of Appendix 1 of Section 9. It is our opinion that no person reviewing pictures 1-9 or visiting the area would

agree with this description and that the LVIA portrays the landscape as more or less an industrial wasteland with no redeeming features. This is not the case and the requirements to accurately portray the area in words to *"someone who cannot see it"* have not been met in many parts of the LVIA. This falls well short of best practice.

3.2.34 The site falls within the River Aire Corridor Local Character Area 4D, one of the four river corridors in the Humberhead Levels and its description reinforces the fact that the ES has placed an unecessarily harsh interpretation of the current baseline:

*"The River Aire corridor is a narrow landscape character area which includes the grass banks and fields either side of the river.*

*The River Aire is relatively narrow and has a semi-enclosed character as a result of intermittent vegetation and river banks. This contributes to the medium scale of this attractive and important wildlife corridor."*

3.2.35 At 8.4 of GLVIA it states that *"text should be concise, to the point and impartial*". At 2.11 of the GLVIA is states that *"It is necessary to differentiate between judgements that involve a degree of subjective opinion..... from those that are normally more objective and quantifiable".*

3.2.36 In 2.27.1 to 2.27.6 the LVIA describes the impact upon the landscape character with words such as: *"The turbines being seen as clean, simple structures with a form closely related to the function. They would appear as graceful and elegant features of the landscape fabric, with a high degree of transparency".* This 34 word description is entirely subjective to the parties who prepared the LVIA. It is not objective and not quantifiable. If the Applicant requires such words to describe the impact, the report should state that this is their opinion. It is not based on any public consultation or any objective opinion. This criticism also applies to the Applicant's description of our local landscape which suffers from the same degree of non-transparency.

***Consultation***

3.2.37 There are many references in the GLVIA, VAW and LCAG to recommendations regarding public consultation with statutory bodies, local stakeholders and councils. The only reference to consultation in the proposal is at the LVIA section 7.3.1 where it states that "Consultation relating to the scope of assessment and viewpoint selection was undertaken and agreed with Selby District Council." The lack of information about other consultees suggests that no other consultation took place. The level of consultation is the responsibility of the Applicant. The consultation has fallen well short of best practice and the Planning Officer should take due note.

***Methodology***

3.2.38 The ES within the methodology, identified in 7.5-7.8, systematically underestimates the baseline and impact of the scheme. To show a few examples:

- For landscape value only nationally or regionally designated landscapes are considered to register above the lowest sensitivity.

This is counter to the view that undesignated landscapes can be highly valued locally.

- Users of secondary footpaths are considered to be of only medium sensitivity when the GLVIA considers all users of footpaths to be of high sensitivity. Similarly residents will be of high sensitivity whether using a main or secondary view.

- Also by using a 3x3 grid (Fig. 7.3) to determine significance (the fourth column of negligible in terms of magnitude adds nothing to the assessment) will tend to undervalue the impact compared to the normal more extensive 5x5 grid.

***Conclusions***

3.2.39 Best Practice Landscape and Visual Impact Assessment has not been followed:

- Unrealistic visual representations of the proposed windfarm, landscape and visual impact.
- Subjective description of the immediate and wider landscape.
- Subjective description of windfarms and their appearance in a landscape setting.
- Inadequate consultation with local stakeholders.

## Overall Conclusion

3.2.40 The ES admits that the scheme would:

- create a wind farm landscape within 800m
- there would be potential for significant effects on parts of the Selby Plain, West Selby Ridge and Hambleton Sandstone Ridge (containing two areas of Locally Important Landscape Areas)
- Significant visual effects on residents up to 6km, including 16 villages and numerous dispersed dwellings

3.2.41 It then concludes that even given these adverse impacts, which we have argued are probably underestimated, that the scheme is acceptable. It justifies this by way of a number of dubious rationales.

3.2.42 Firstly it says that the significant effects are reversible. This argument, based on a planning period of 25 years, has been demolished at previous wind farm Inquiries. Thus at Brent Knoll (APP/V3310/A/06/2031158) the Inspector said: *"However, as such a time period is roughly a third of an average lifetime I have some difficulty in regarding it as "temporary" in any real sense. If the turbines would cause significant harm to the landscape character, as I believe is the case here, that harm would not be made more acceptable by the prospect of their ultimate removal."*

3.2.43 Secondly it says that the fourteen 125m high wind turbines will relate well to local landscape character and significant landscape and visual effects will be localised as a result of the flat topography and woodland cover. It is difficult to see how fourteen industrial structures coalescing four villages can be said to relate well to what is, in the words of the local landscape character area, a medium scale attractive wildlife corridor. The wind farm

will be out of place and of such a size and scale as to dominate the local countryside. The presence of nearby woodland will not localise visual effects but rather will provide an immediate relative scale which will emphasise the height of these turbines. Also, blades appearing and disappearing above the trees are recognised as being more visually intrusive than the situation where the whole turbine can be seen and which provides a relevant context.

3.2.44 Lastly it says that the proposal has minimised adverse impacts on existing communities and respects the key features and character of the landscape, and significant effects on visual receptors will be limited. We have shown in this and other sections that these claims do not stand up to any independent scrutiny.

**3.2.45 We agree with the ES that there will be many significant adverse effects but argue that these adverse impacts are not acceptable and that this planning application should be refused.**

## 3.3 OBJECTION - IMPACT ON CULTURAL HERITAGE

- PPG15 says that Grades 1 and 11* listed buildings are "*of particularly great importance to the nation's built heritage: their significance will generally be beyond dispute"*
- We believe the Applicant has not considered some important historic sites and has misinterpreted the assessment standards for those which have been considered; this has had the effect of skewing the results
- The Applicant does not appear to have considered the SINCs
- Comparison with a recently refused application elsewhere shows that the application should be rejected

**Note this Objection should be read with reference to photographs and sketches in Appendix 3.3**

### Introduction

***Description of the Site***

3.3.1 The proposal is for 14 no. 125 m high wind turbines sited in an area approximately 3 km x 1 km. The application site lies in a flat open area of agricultural land. It abuts Green Belt on its southern boundary and on its northern boundary it abuts the historic Gateforth Hall Estate, the setting of a Grade 11* listed building. The site is crossed by 6 footpaths recorded on the Ordnance Survey and these are shown in Appendix 3.3, Sketch 3.3 SK1 "Rights of Way".

3.3.2 Within 5 km of the site there are:

- 21 listings of grade 11 or above, three of which are Grade 1 or 11*
- Two scheduled monuments
- Two areas of locally important landscaped areas
- One historic park or garden
- Five sites of importance for nature conservation
- Two conservation areas

Most of the above lie within 2 km of the site

3.3.3 We will set out here our objection to the proposed development because of its enormous impact on sensitive areas of the district's Cultural Heritage. The areas of concern we will discuss are Listed Buildings, Conservation Areas, Sites of Importance for Nature Conservation, Historic Parks and Gardens, Locally Important Landscaped Areas, Scheduled Monuments and Green Belt. See Appendix 3.3 - 3.3 SK2 "Wider Site Context".

3.3.4 We will use as reference the following Planning Guidelines:

- Planning Policy Guideline 15 (PPG15) "Planning and the Historic Environment"
- Planning Policy Statement 22 (PPS22) "Renewable Energy" and its companion guide
- Scottish Planning Advice Note 45 (PAN45)
- Selby Local Plan

## PAN45

3.3.5 PAN45 sets out the varying perception of a wind farm based on the subject distance from the wind farm in open landscape:

- Up to 2 kms - Likely to be a prominent feature
- Up to 5 kms - Relatively prominent
- Up to 15 kms - Prominent in clear visibility
  - seen as part of the wider landscape
- Up to 30 kms - Seen in very clear visibility
  - a minor element in the landscape

3.3.6 See Appendix 3.3 Sketch SK3 which graphically shows the limited consideration the Applicant has given this important advice.

3.3.7 At 10.4 of the Applicant's Environmental Statement they have produced a table (Figure 10.3) which purports to combine the severity and the significance of the effect on settings. **We believe the Applicant has misinterpreted the standards, which has the effect of skewing the results in Fig 10.3.** We have proposed an alternative interpretation with what we consider to be a more balanced viewpoint. See Appendix 3.3 - Table 3.3 SK4.

## Listed Buildings

3.3.8 We schedule below details of 21 listed buildings of Grade 11 standard and above and show the significant impact the application will have on each.

***3.3.9 Plan Reference A 22 Main Road, Hambleton***.

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significance impact | Applicant's assessment | Not considered |
| | SWL assessment | Moderate |

***3.3.10 Plan Reference B Church of St Mary, Birkin***

Within 2 km of nearest wind turbine
Grade 1

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Major |
| | SWL assessment | Major |

***3.3.11 Plan Reference C Birkin Grange, Birkin***

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.12 Plan Reference D Birkin House***

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.13 Plan Reference F Paper House Bridge, Gateforth***

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Not considered affected |
| | SWL assessment | Moderate |

***3.3.14 Plan Reference G Burton Bridge, Gateforth***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Not considered affected |
| | SWL assessment | Moderate |

***3.3.15 Plan Reference H Church Lodge, Gateforth***

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.16 Plan Reference J Gateforth Hall, Gateforth***

Within 2 km of nearest wind turbine
Grade 11*

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Major |

***3.3.17 Plan Reference K Coach House, Gateforth***

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.18 Plan Reference L West Lodge, Gateforth***

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.19 Plan Reference M Tankards Bridge, West Haddlesey***

Within 2 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Not considered affected |
| | SWL assessment | Moderate |

***3.3.20 Plan Reference N Lodge to Monk Fryston Hall***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.21 Plan Reference P Monk Fryston Hall***

Within 5 km of nearest wind turbine
Grade 11*

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Moderate |
| | SWL assessment | Major |

***3.3.22 Plan Reference R Methodist Church, Monk Fryston***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.23 Plan Reference S Cow Shed & Granary Hillam***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.24 Plan Reference T Hall Farm House, Hillam***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.25 Plan Reference U Stable to Hall Farm, Hillam***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.26 Plan Reference V Hillam Hall***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.27 Plan Reference W Threshing Barn, Hillam***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.28 Plan Reference X Former Carthouse & Stables, Hillam***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

***3.3.29 Plan Reference Y Coach House, Hillam***

Within 5 km of nearest wind turbine
Grade 11

| | | |
|---|---|---|
| Significant impact | Applicant's assessment | Minor |
| | SWL assessment | Moderate |

3.3.30 The above 21 references show how the Applicant consistently undervalues the significance of the impact that the application will have on these valuable heritage sites. PPG15 para 3.6 states: *"Grades 1 and 11* identify the outstanding architectural or historic interest of a small proportion (about 6%) of all listed buildings.* ***These buildings are of particularly great***

***importance to the nation's built heritage: their significance will generally be beyond dispute"…***

3.3.31 The Study Area definition at 10.6 of the Applicant's Environmental Statement seems to acknowledge our values but figure 10.2 adopts different criteria. The application will have visual dominance over all these 21 listings. The vertical scale of wind turbines 125 m high in a flat rural landscape will make them the most visually dominant feature.

3.3.32 We provide below studies for two particular cases of higher value listings.

***Gateforth Hall (Grade 11*)***

3.3.33 Gateforth Hall (Grade 11*) is currently the most prominent local feature. It is constructed on raised ground and it is approximately 35 m AOD to the roof and it is 1.7 km from the nearest wind turbine. The Hall is seen from many distant viewpoints throughout the village of Gateforth and beyond and can be seen from ground level on the application site (see Appendix 3.3 - Photographs 3.3.1 to 3.3.6). From these viewpoints of Gateforth Hall the 14 no. turbines will be dominant. From Gateforth Hall the minimum that will be visible at all times will be the generator housing and the top half of the arc of the blades in all 14 cases. In winter when the trees are bare most of the towers will also be visible. This does not meet the intervisibility requirements of PPG15 para 2.*17 "A proposed high or bulky building might also affect the setting of a listed building some distance away"* (see Appendix 3.3 - Photographs 3.3.7 to 3.3.9).

3.3.34 The Applicant states at 10.11.4 that the main aspect of the house is towards the southwest. It is a matter of fact that because of its elevated setting Gateforth Hall enjoys a wide panorama of historic rural landscape. The Applicant makes reference to the Hall *"looking directly towards Drax Power Station"*; they fail to note that it is 12.5 km from Gateforth Hall.

3.3.35 The setting of Gateforth Hall is the original Estate shown on the plan attached to the 1896 sale particulars (see Appendix 3.3 - Drawing 3.3 SK5). The land encompassed in the 2086 acre estate is still intact and is still used as agricultural land. Gateforth Wood to the south is part of the historic setting and the south side abuts the application site. The Applicant's statement *"Gateforth Hall is not situated within a designed landscape; its setting is provided by its immediate grounds"* is factually inaccurate as the Hall and Hambleton Hough lie within an area designated as a Locally Important Landscaped Area.

3.3.36 Further, PPG15 at para 2.13 states *"the setting of a building may often include land some distance from it"* and this is confirmed in detail in ENV 22 of the Selby Local Plan. The Applicant's efforts to limit the setting of Gateforth Hall to the current ownership boundary are not credible in this context. PPG15 para 3.34 deals with changes of ownership and states that such changes do not affect the listing.

3.3.37 The setting of Gateforth Hall has always been its agricultural land and this setting is wholly intact. Given its status set out in PG15 para 3.6 ***"great importance to the nation's built heritage: their significance will***

***generally be beyond dispute"***. We do not consider that the Applicant has shown adequate recognition of this fact.

***St Mary's Church, Birkin (Grade 1)***

3.3.38 The Applicant's Environmental Statement at chapter 10 para 11.3 acknowledges that the Church is considered to be *"one of the most impressive Norman Churches in Yorkshire"*. It is sited at the southern end of the village and will be 1.2 km from the nearest wind turbine. The Applicant also acknowledges that the Church *"can be seen from some distance across the flat countryside – for example it is visible from the churchyard at St Edmund's Church near Kellington, about 2.5 km away".*

3.3.39 There are two other listed buildings, Birkin House and Birkin Grange; both are Grade 11 listed and are closer to the wind turbines than the Church.

3.3.40 The Environmental Statement attempts to limit the impact of the development by stating that the turbines will be visible only across a 70° area of view. They also state that the Church building will retain visual dominance. We find that an unrealistic statement given the difference in height of the Church tower and the wind turbine.

3.3.41 The Applicant does not adequately consider a viewpoint from south of the Church, say from the banks of the Old Eye or Intake Lane. The turbines will be three times higher than the Church tower and will dominate these aspects.

3.3.42 Similar to our comments above regarding Gateforth Hall, the impact on St Mary's Church will not meet the requirements of PPG15 and PPS22.

3.3.43 ENV22 of the Selby Local Plan provides the legal framework for the "Protection of Listed Buildings" which states *"Development will not be permitted where it would have a detrimental effect on the character, fabric or setting of a listed building".* We feel this gives the officers of Selby Planning Section and the members of the Planning Committee grounds for refusal.

3.3.44 This view is supported by the recent planning officers' recommendation for refusal of the application to erect 2 no. 125 m high wind turbines at Chelker Reservoir, Addingham, Ilkley. The reason for recommendation for refusal stated at paragraph 10 of the officers' report is *"The siting and development of the proposed replacement turbines with a maximum height to the blade tip of 125 m would be seen from a number of historic locations and this would have a significant impact on the historic landscape in the locality and (in) particular that of the priory at Bolton Abbey and Fairfield Hall, both of which are Grade 1 listed".*

3.3.45 The officers of Selby District Council should consider the comparison with the Woodlane application:

| | **Addingham** | **Selby** |
|---|---|---|
| **Current use** | - Wind farm 4 x 41.5m | - Agriculture |
| **Number proposed** | - 2 | - 14 |
| **Distance to listed buildings** | - Bolton Abbey - 2.6km<br><br>- Fairfield Hall - 1.6km | - Gateforth Hall - 1.7km<br><br>- St Mary's Church - 1.4km |

Table 3.3.1

**By any reasonable assessment the Woodlane wind farm will have a much greater impact than the Addingham wind farm which was refused.**

***Conclusion***

3.3.46 We recommend the refusal of the application on the grounds that in relation to the listed buildings within the area of significant impact the requirements of PPG15, PPS22 and PAN45 have not been duly considered.

## Conservation Areas

3.3.47 There are two Conservation Areas, Monk Fryston 2½ km from the nearest wind turbine and Hillam 2 km from the nearest wind turbine.

3.3.48 The Companion Guide to PPS22 para 3.34 advises: *"One of the judgements to be made in planning for renewable energy is to determine the sensitivity of the landscape. Sensitivity relates to the character of a landscape and how vulnerable this is to change. It is assessed by considering the physical and perceptual characteristics of a given landscape character type/area in relation to particular forms of development."*

3.3.49 Monk Fryston Conservation Area has three listed buildings and these we have assessed in section 3 of this report (Plan ref N, P and R). See Appendix 3.3 - Drawing 3.3SK2.

3.3.50 The Applicant starts his assessment by stating that: *"The village of Monk Fryston is about 3 km northwest of the proposed site".* We calculate that the nearest wind turbine to the edge of the Conservation Area is less than 2½ km, a further example of the Applicant's misinterpretation which serves to minimise the impact.

3.3.51 The Applicant assesses the impact on the Conservation Area to be moderate and the Grade 11 listed buildings as minor. We assess the Conservation Area to be major and the Grade 11 buildings to be moderate.

3.3.52 The village consists of a range of properties, mostly cottage style with some agricultural building converted to residences. The scale and massing of the

wind farm will have a dominant visual effect from the properties on the boundary of the Conservation Area.

3.3.53 Hillam Conservation Area has seven listed buildings and these are assessed in section 3 of this report (Plan references S, T, U, V, W, X and Y). See Appendix 3.3 - Drawing 3.3SK2.

3.3.54 The applicant has assessed the impact on the Conservation Area to be moderate and on the listed buildings as minor. Our assessment on the buildings was moderate. This however is based on the 5 km magnitude range. In fact these buildings and the Conservation Area are only 2.1 km from the nearest wind turbine. If we used the 2 km bank of magnitude the assessment would rise to major for the conservation area and the upper border of moderate for the listed buildings.

3.3.55 The village consists of a range of properties, mostly cottage style with some agricultural building converted to residences. The scale and massing of the wind farm will have a dominant visual effect from the properties on the boundary of the Conservation Area.

3.3.56 We consider that the Applicant has minimised the impact on the Conservation Areas due to the skewing effect of their Fig 10.3.

***Conclusion***

3.3.57 We recommend the refusal of the application on the grounds that, in relation to the two Conservation Areas within the area of significant impact, the requirement of PPG15 PPS22 and PAN45 have not been duly considered.

## Sites of Importance for Nature Conservation

3.3.58 There are three SINCs within the study area:

- Staker Wood which is 500 m from the nearest wind turbine
- Birkin Holme which is 800 m from the nearest wind turbine
- Bywater Wood which is 2.5 km from the nearest wind turbine

3.3.59 We assess the significant impact on these areas as major. **The Applicant does not appear to have considered these areas.**

***Conclusion***

3.3.60 We recommend refusal of the application on the grounds that these sensitive areas in close proximity to the development have not been given due consideration.

## Historic Parks and Gardens

3.3.61 The Applicant considers Monk Fryston Hall and Byram Hall and Park; both are assessed as of minor impact. Using our criteria we consider the impact to be moderate.

## Locally Important Landscaped Areas

3.3.62 There are two LILAs within the study area, Hambleton Hough which is 2 km from the nearest wind turbine, and Brayton Barff which is 3½ km from the nearest wind turbine.

3.3.63 Both these areas provide an amenity for walking and horse riding. They are elevated areas and are the highest point of land at approximately 50 m AOD in the district.

3.3.64 The long-distance views from these public areas will have a severe impact from the windfarm when looking southwest.

3.3.65 We assess the impact to be moderate. The Applicant does not appear to have given them consideration.

***Conclusion***

3.3.66 We recommend refusal of the application on the grounds that in relation to the two Locally Important Landscaped Areas within the area of significant impact the requirements of PPG15, PPS22 and PAN45 have not been duly considered.

## Scheduled Monuments

3.3.67 There are two scheduled monuments within the study area.

- Monument 91995 site of a Roman auxiliary fort
- Monument 56177 a double moated enclosure and central platform

3.3.68 The Applicant considers the impact to be moderate in relation to the fort site and the enclosure site as moderate. We assess the impact to be major for the fort site and the enclosure site to be major.

## Green Belt

3.3.69 The impact on the Green Belt to the south and west of the application site has been dealt with in detail elsewhere.

3.3.70 The Applicant does not meet with the requirements of PPG2 paragraph 3.15 and Selby Local Plan SG1 and GB4 and should be refused.

## Summary

3.3.71 The Applicant has failed to meet the requirements of PPG15, PPS22 and PAN45 in relation to the protection of listed buildings and their settings within the study area.

3.3.72 The Applicant has failed to meet the requirements of PPG15, PPS22 and PAN45 in relation to the Conservation Areas within the study area.

3.3.73 The Applicant has failed to meet the requirements of PPG15, PPS22 and PAN45 in relation to the Sites of Importance for Nature Conservation within the study area.

3.3.74 The Applicant has failed to meet the requirements of PPG15, PPS22 and PAN45 in relation to the Locally Important Landscaped Areas within the study area.

3.3.75 The Applicant has failed to meet the requirements of PPG2 and Selby Local Plan SG1 and GB4 in relation to the areas of Green Belt within the study area.

## Recommendation

3.3.76 We request that the officers and the committee members of Selby Planning Section find the above compelling facts satisfactory to refuse planning permission on the grounds that the application is contrary to the requirements of PPG15, PPS22, PAN45, PPG2 and the Selby Local Plan SG1 and GB4.

## 3.4 OBJECTION - NOISE

- Background noise measurement is flawed and incomplete
- Noise predictions are inaccurate and incomplete and cannot be relied upon
- Noise limits are close to being exceeded at properties
- Whole villages may be exposed to noise problems and loss of residential amenity
- The application does not conform to ETSU-R-97 and hence does not meet the requirements of PPS22 and should be refused

3.4.1 The assessment of noise from wind farms is a complicated technical subject. The Government realised early in the development of onshore wind that if the noise output was assessed under the existing methodology for industrial development (BS4142) of allowing 5dB above background then, because most sites were in rural locations with low background noise, it would mean that most wind farms would be refused. Therefore they introduced a specific methodology - ETSU-R-97 - for the assessment of noise from wind farms.

3.4.2 The first part of our noise submission is a paper “Wind Turbines and Noise - A Review of the Current Situation” by Mike Barnard which reviews both the ETSU-R-97 methodology and research/experiences from both the UK and other countries.

3.4.3 It shows that whilst ETSU-R-97 is the methodology that PPS 22 states should be used to assess and rate the noise output from a wind farm development, ETSU admits itself that it is not a method for assessing the impact of the noise emissions on local residents.

3.4.4 The compromise ETSU has adopted between not constraining onshore wind farm development and protecting the amenity of local residents means that it has adopted less stringent noise requirements than are in place for other industrial developments. This is even more important in a location such as this where the background noise levels are shown to be low, particularly at night. The area is particularly tranquil and this makes the intrusion of any external noise more alien and disturbing.

3.4.5 The assumptions and experience from which ETSU was drawn up, being based on turbines of much smaller height and blade diameter, have limited relevance to the size and scale of the turbines being proposed for this scheme. Yet there has been no attempt to update ETSU in the twelve years since its introduction.

3.4.6 Even without any update the assumptions and methodology used raise serious concerns over whether it is a credible instrument to ensure that local residents do not suffer an unacceptable reduction in their amenity, health and quality of life.

3.4.7 Crucially even if a wind farm is shown to comply with ETSU there is no guarantee that there will not be serious noise problems for local people.

3.4.8 Given these conclusions it is vital that there is no exceedance of the ETSU guidelines. Indeed to take account of the serious issues, such as aerodynamic modulation, wind shear, input turbulence etc., that are not covered by ETSU, we argue strongly that, to avoid any potential noise problems to local residents, there should be a margin of error built in of at least 5dB between the projected worst case output of the wind farm and the ETSU guidelines.

3.4.9 Given we have shown above that even if a proposed wind farm scheme does comply with ETSU-R-97 there is no guarantee that a noise nuisance will not occur it is imperative that a thorough and rigorous noise assessment is carried out. This is particularly important in this case where there are four village communities surrounding the site in very close proximity to the nearest turbine.

## Background Noise Measurement

### *Measurement Locations*

3.4.10 Seven measurement locations have been used. Of these two, 19 Ings Lane Kellington and Kenmere, Beal were included to take account of the larger original scheme and being further away than other closer houses have no relevance to this final scheme. As such they have been disregarded in this rebuttal and should have been left out of the ES.

3.4.11 ETSU-R-97 is very clear that its methodology is based on measuring the specific noise environment of the nearest noise sensitive properties so that the noise output of the turbines can be related directly to that particular noise environment. The selection of the actual measurement locations is crucial to reflect the external noise environment where the residents spend the majority of their time when enjoying the amenity of their garden as ETSU is predicated on external limits. The locations chosen here throw up a number of problems.

3.4.12 Of the five properties selected three were on property owned by landowners with a financial interest, namely new property at Paperchase Crossing, Malt Kiln Farm and Woodhouse Farm. This implies that there was a tendency to avoid potential problems with local residents by trying to use financially involved properties. This finds maximum expression in the case of Malt Kiln Farm which is not even the nearest property in West Haddlesey but was selected in preference to more typical residential dwelling which would be quieter than a working farm and is also closer to the site.

3.4.13 Maspin House - here the microphone was sited in an open field to the rear of the property, well away from the main amenity area of the garden in direct contravention of the guidance in ETSU-R-97. As can be seen from Fig 11.3 (EIS) this placed it closer to both the A63 and a field 100m away, both with no intermediate screening. This would have given an enhanced background reading particularly as the two adjoining fields were cleared of straw bales, ploughed, harrowed, and cultivated. In the background of the photograph bales can be seen to prove this point. During the noise measurement period the noise environment was dominated by the farming

activity, which only takes place for a brief period each year. For the rest of the year the only activity is occasional spraying.

3.4.14 The raw data for this location also clearly shows the times when the grass was being mown in the garden around the microphone. Yet it appears that none of this atypical data has been excluded as ETSU-R-97 requires.

3.4.15 Our picture shows a 300hp tractor turning the plough in close proximity to the location used for the noise measuring equipment. The photo was taken from the location of the measuring equipment. Photo taken 12 August 2009 – ploughing was earlier due to the crop being oats which is harvested earlier than wheat.

Fig. 3.4 .1 300hp Tractor and 8 furrow plough turning at the edge of the garden only 50 metres from the measuring site

3.4.16 The noise level measured during this operation was 53dB closest to the garden and declining no lower than 40dB at the other end of the field.

3.4.17 New Property at Paperchase Crossing - as can be seen in Fig.11.5 (EIS) this is a part built property in a farm yard owned by Thomas Askins - a farmer with two turbines on his land. The building has been erected as far as the first floor but has yet to be completed. The area around the property is used as both a storage area for farm machinery and for piles of spent mushroom compost which is tipped and recycled from the site. Thus it cannot be representative of the situation when the house is finished. This is a working site used by a farmer and not a residential site. This is commented on in the EIS by the statement that on picking up the equipment the ES notes that a lorry and forklift truck were working in the farmyard. Again such atypical data has not been excluded.

3.4.18 Malt Kiln Farm - Again Fig. 11.6 (EIS) shows that the measuring equipment was set up close to barns that appear to be in use and the presence of a cement mixer and used pile of sand indicates that building work was also being carried out. Yet this site is supposed to be representative of all residential properties in West Haddlesey. This is patently not credible and given that this village, situated directly at the end of two rows of turbines, will be susceptible to interference noise effects then a truly representative background noise assessment is vital.

3.4.19 Although neither 19 Ings Lane or Kenmere, Beal are now relevant to this assessment it is interesting to note that both microphones were sited directly next to water features and in the case of Kenmere there was a weir at the end of the garden. This is in direct contravention of the guidance in ETSU-R-97 which specifically warns against the presence of running water.

3.4.20 Woodhouse Farm - Yet again Fig. 11.8 (EIS) shows that the measurement location is next to a barn in a working farm area from the presence of farm machinery in the photograph. This is confirmed by the ES noting reverse bleeping, presumably from farm machinery when the equipment was picked up.

3.4.21 Melton Cottage, Gateforth - Appears to be the only location where a suitable site has been used. However a gas pipeline forming part of the national gas distribution network was being installed at the time and heavy earthmoving equipment was in operation just 250 metres south of Melton Cottage.
A local resident said:
*'I was training for the Great North Run this time last year. The event was on 5th October in 2008. In September, the training was getting pretty intense. I ran a lot of miles around Gateforth, Hambleton, Haddlesey between 2-17 September*

*Being an engineer myself, one thing I took note of was how work was progressing on the pipeline between my runs over the same stretch of road. I can say categorically, that there was heavy earth moving equipment active at that time The pipeline was largely already laid, but back-filling was taking place during the period 2-17 September.*

Fig 3.4.2 Gas pipeline being laid South of Gateforth village. Heavy equipment being used.

*Backfilling required bulldozers; many of them. There was also a lot of construction traffic moving about between sites, supervisors' 4*4's for example. There were also a number of pumping sets that were used to keep the trenches from flooding. They were running night and day.'*

3.4.22 The ES states that the wind speed and direction measurements were carried out using the anemometer mast on the wind farm site itself. This mast is to the eastern end of the site, in open fields and is a considerable distance from some of the houses close to turbines at the western end of the site, because of the length of the rows of turbines. Thus the mast is:

- 2.4km from the homes at the end of Common Lane
- 1.2km from Gateforth
- 2.2km from Birkin

3.4.23 Wind at 10m in these three locations will bear little relationship to that at 80m at the test mast. Given the size of the wind farm, wind speed

measurements should have been taken closer to these locations to reflect the actual wind environment that would have been impacting the background noise measurements.

***Wind Direction***

3.4.24 As has been mentioned above the specific noise environment at each measurement location is crucial. Given that the individual background noise characteristics of each dwelling will be unique and will vary differently by time of day, wind speed and wind direction it is vital that the survey period is sufficiently long to provide a complete spectrum of values for each variable.

3.4.25 This is defined in ETSU-R-97[1] which states:
*"The background survey should be taken over a sufficient period of time to enable a reliable assessment of the prevailing background noise levels at each property to be made. As a guideline, an appropriate survey period might be 1 week, although the actual duration will depend on the weather conditions, in particular the wind speed and direction during the survey. It* ***must (our emphasis)*** *be ensured that, during the survey period, wind speeds over the range zero to at least 12m/s and a range of wind directions that are typical of the site, are experienced."*

3.4.26 Chart 11.1 in Appendix 11 of the EIS shows the range of wind speeds and directions. This appears to show a reasonable spread of directions and speeds in accordance with the requirements of ETSU-R-97. However, when the data is studied in more detail then some anomalies appear.

3.4.27 Chart 11.1 is clearly labelled "Wind speed versus direction during noise survey". In other words it is specific to the noise survey period. In the chart there are a considerable number of data points in excess of 7m/s wind speed and yet in Figs 11.15 to 11.30 in the main text of the ES, which show the noise wind speed graphs for each measurement location, there are only a handful of data points above 7m/s. It might be assumed that they might have been excluded but the figures already identify those points excluded.

3.4.28 There is no explanation in the ES for this discrepancy. Have points been removed arbitrarily or does Chart 11.1 include data outside the noise survey period to improve the claim that there was a sufficient range of wind speeds and direction? Either way it appears that the data contained in the noise impact assessment cannot be relied upon.

3.4.29 Certainly figs 11.1 - 11.30 do not show a range of wind speeds up to 12m/s as required by ETSU-R-97. This is particularly important as the background noise best fit lines in a number of the properties show sharp increases at higher wind speeds based on very limited data. This has the effect of increasing the derived noise limits at the expense of residential amenity.

***Unrepresentative Noise***

3.4.30 ETSU-R-97 makes it clear that atypical noises such as rainfall or seasonal activity should be excluded from the data. The charts indicate that some data points have been removed for rain. The readings were taken, for all locations during September which is a peak time for agricultural activity

[1] Pg99 1.2 The Background Survey

associated with the harvest. The impact on Maspin House has already been discussed but with three of the other measurement locations being agricultural properties this will have had the effect of increasing background noise levels there as well.

3.4.31 In other ESs Hayes McKenzie, who carried out this work, have included for all locations the complete time history of all readings including wind speed and direction. This would have been useful here to provide a better understanding of what is actually happening. Working with averages and without access to the raw data makes any objective critique of the charts and calculations much more difficult.

***Seasonality***

3.4.32 ETSU-R-97 also makes clear that the time of year in which measurements are taken may also have an effect and by taking only one set of measurements for this application means there is no analysis of seasonality. The ES claims to work on a worst case scenario but only uses data from a short time period (in a recent Inquiry at Clacton Hayes McKenzie used over four weeks of data not the mere 15 days here) in September, when it is likely that agricultural work and movement could have been at a high level removing bales of straw and preparing the ground for planting the next crop. There is, therefore, no way of knowing whether other seasons may have lower background noise levels.

3.4.33 It is likely that in winter, with no leaves on the trees and minimal agricultural work, the background noise would be lower, particularly in gardens. It is interesting that in a recent case in South Cambridgeshire Hayes McKenzie carried out both summer and winter measurements and there were up to 6dB differences between the readings from the same locations. With significant increases in recorded background noise at higher wind speeds, presumably from noise from trees, this is particularly relevant here.

***Summary of Background Noise***

3.4.34 We have shown that the background measurement regime has significant flaws which seriously limit the level of confidence that can be attached to the derived background noise curves. In cases where there is a significant separation distance between dwellings and the turbines this would not matter so much. However, in this application where the site is surrounded by four villages at close distances the accuracy of the background noise readings are crucial. If this scheme is approved any noise conditions to protect resident's residential amenity and quality of life will be derived from these background measurements.

3.4.35 The potential increase in background noise due to atypical noise from agricultural work has not been accounted for in the ES and the above arguments have shown that the background noise measuring regime was not compliant with the ETSU guidelines, was incomplete and unrepresentative.

3.4.36 **The flawed and incomplete background noise assessment means that the conclusions drawn in the ES about the potential for noise nuisance cannot be substantiated.**

## Noise Predictions

3.4.37 Notwithstanding that no conclusions can be reached regarding background noise levels there are also concerns regarding the predicted noise output from the wind farm in a number of areas.

3.4.38 It is impossible to accurately predict what the actual output of any wind farm will be prior to commissioning. There are too many variables specific to each site. This is why a worst case scenario must be used to provide some form of contingency. As we will show below in this case not only is there no contingency but also key factors that ETSU is acknowledged not to take into account are completely ignored.

3.4.39 In this case the nearby power stations generate heat which rises and causes a hot layer which is then blown downwind. Its effect can be seen because it carries any smoke with it in a clearly visible thin layer, which can stretch for miles. Such layers of hot air are known to cause sound reflection which can increase noise levels

3.4.40 There is no evidence within the ES of how noise has been included in the iterative design process either by considering alternative turbines (including other manufacturers and other capacities) or different turbine locations.

### *Turbine Data*

3.4.41 The noise data used within the noise impact assessment is for the Nordex N90 2.5MW. The sound power levels are shown in Fig 11.10 and indicate that the noise output increases steadily up to 105dB at 12m/s. Yet in the ES the noise contours in Fig 11.13 are shown at 10m/s, with the explanation that these contours represent worse case wind conditions. Actually worst case conditions would be at 12m/s when the noise output of the turbines would be 1dB louder.

### *Critique of Calculations*

3.4.42 ISO 9613-Part 2 is the methodology used to model the noise propagation from the turbines. This methodology has a tolerance error of 3dB which has not been taken into account. If this was assumed, to account for a worst case scenario then this would mean the ETSU-R-97 limits at Gateforth, Paperhouse Crossing, Woodhouse Farm and Birkin would be exceeded.

### *Wind Shear*

3.4.43 There is emerging evidence that at night in stable atmospheric conditions the wind speed at rotor blade height is not accurately predicted from the 10m height wind speed measurements. Fritz G.P. Van Den Berg (Effects of the Wind Profile at Night on Wind Turbine Sound- Journal of Sound and Vibration - 2003) has shown that wind speed at hub height at night is up to 2.6 times higher than expected and consequentially up to 15dB higher sound levels can be expected, relative to the same reference speed in daytime. Thus when the wind speed is low at ground level, with correspondingly low background noise, at rotor height the speed will be higher and the noise produced by the turbines will be greater than that predicted by a normal logarithmic conversion of wind speed by height.

3.4.44 In this instance with wind speed data available at 80, 60 and 40m the prevalence of wind shear could have been determined by analysing this data. Yet no such calculations have been carried out. This would also help to show, together with analysis of the direction measurements at 78 and 38m, how much variation in wind speed and direction would occur across the rotor diameter. There is emerging evidence that as blades have become longer variation in the wind conditions along the length of the blades has lead to sub-optimal conditions at blade edge leading to increased noise output. In this case the proximity to woodland which will form a barrier to wind is likely to make conditions worse.

3.4.45 The other assumption is that wind shear effects only occur at night. Wind shear effects are impossible to predict as they are very dependant on the specific topography of each particular site. In a recent Public Inquiry the Inspector accepted that for that particular site stable atmospheric conditions (the requirement for wind shear) occurred for 82% of the time. Thus there is clear evidence that wind shear is likely to be present at times during the daytime period, particularly as this extends up to 11:00pm. Hayes McKenzie will be aware of this judgement as they did the noise measurements for that scheme. Whilst considering that decision it is also worth noting comments made by the Inspector about Hayes McKenzies' overall background noise measurements:
*"Not only do I consider that Ecotricity's measurements are unrepresentative, but I am also concerned about their accuracy. For example, the results show that background noise was greater when periods of rainfall were discounted. Logic suggests that the opposite would be true. Dr McKenzie, the witness for Ecotricity, could not explain this anomaly, except to say that the rainfall data did not come from the immediate vicinity of the noise sensitive properties. Nevertheless this, together with other minor anomalies, causes me to doubt the accuracy of the results."*

3.4.46 This shows the inherent variability and lack of accuracy of background measurements and reinforces the need for a degree of contingency to be applied.

***Aerodynamic Modulation***

3.4.47 Aerodynamic modulation (AM) is a phenomenon which was the subject of a research paper for the DTI[2] (The Measurement of Low Frequency Noise at Three UK Wind Farms). It concluded that the cause of the noise complaints at these three wind farms was the audible modulation of the aerodynamic noise, especially at night. Although the noise levels were not high enough to result in the awakening of a resident, once awoken the audibility of this noise could result in difficulties in returning to sleep. The authors also concluded that they did not know what caused aerodynamic modulation, that it could not be predicted if a wind farm would suffer from it and that its effects would cause the noise output of the wind farm to be higher than that predicted by the ETSU-R-97.

3.4.48 Indeed one of the sites affected by AM is at Deeping St Nicholas in Lincolnshire. Here the owners of a house 930m away have had to rent a

[2] The Measurement of Low Frequency Noise at Three UK Wind Farms - URN 06/1412

house 5 miles away to assure them of a good night's sleep. Their quality of life has been completely destroyed.

3.4.49 This wind farm will have properties closer than 930m to the turbines.

3.4.50 A further study by Salford University for BERR[3] showed that 19% of existing wind farms had resulted in noise complaints to the local planning authority. This will be an underestimate of the actual noise problem as many people do not complain as they believe that nothing can be done. Also the universe of wind farms in the study included all the smaller original wind farms and the large number in Scotland with no houses within a few kilometres for whom there is no chance of any noise nuisance. Indeed it is now known that at least 38 wind farms have been the subject of noise complaints by local residents to the LPA.

## Construction Noise

3.4.51 The ES does not attempt to evaluate in any meaningful way the potential impact of construction noise. This is disingenuous as the construction of wind farms is a standard process and in other wind farm applications Hayes McKenzie have undertaken a detailed analysis of the construction impact.

3.4.52 The Applicant seems to be doing the minimum amount of work.

3.4.53 Firstly there are not large separation distances to residential properties and construction vehicles will be passing through small villages and close to dwellings on Hillam Common Lane.

3.4.54 Secondly wind farm construction programmes are remarkably uniform in what has to be done. Other wind farm ESs have no problems in undertaking a construction noise impact assessment and this should have been carried out here.

## Results

3.4.55 Even with the problems outlined above in terms of using unrepresentative measurement locations, ignoring certain factors and inaccuracies when modelling noise output, the noise assessment in the ES still concludes that the ETSU daytime noise limits will be close to being exceeded at Birkin, Woodhouse Farm and Paperhouse Crossing. These will not be the only properties affected as they are merely representative of other properties in the vicinity.

3.4.56 Any protection would be via a planning condition that would be based on the inaccurate background noise measurements and the discredited ETSU-R-97 methodology. The implications of this were shown in the Inquiry mentioned earlier where the Inspector concluded:

[3] Research into Aerodynamic Modulation of Wind Turbine Noise - URN 07/1235

"*I consider that the suggested conditions could not control noise effectively. They fail the Circular 11/95 tests of precision and enforceability, and they are too cumbersome for frequent use.*"

3.4.57 In other words if the scheme were built it would be extremely difficult for residents to get any protection if a noise nuisance occurs. We have shown that a significant noise nuisance is likely to occur here with the only issue being how great. It is impossible to predict with any degree of accuracy exactly what the noise impacts will be of such a large wind farm situated between four villages. The only way of ensuring no degradation of residential amenity is to maintain an adequate separation distance. Yet here the turbines are so close that ETSU limits are close to being exceeded already and thus there is no contingency to take account of the numerous issues that have not been taken into account in the noise assessment.

3.4.58 This was reinforced in the Shipdham decision where the Inspector stated: *"ETSU-R-97 does not set a* minimum *separation distance. However, I note that other wind farm developers such as Powergen Renewables and Enertrag look for separation distances of at least 700m; and Scottish Power's Windfarm Site Selection Policy requires an even greater separation of at least 1000m. In my view, the separation distances have not been chosen to minimise increases in ambient noise levels; a requirement of paragraph22 of PPS22."*

3.4.59 RES in their ES for the Wadlow Farm Wind Farm stated:
*"1.4 The RES GIS selection criteria were further refined during 2005/early 2006 to expand habitation buffers to 800m to reflect good practice in wind farm design*.

Here the Applicant has only used 500m as their separation distance against industry best practice. This has the effect of increasing the potential adverse impact to residential amenity through noise.

**3.4.60 The application does not meet the requirements of ETSU-R-97 and hence is in conflict with PPS 22 and should be refused.**

## 3.5 OBJECTION – HEALTH RISKS

- ? Worldwide reports of health problems experienced by people living near to turbines
- ? Noise problems resulting in sleep disturbance which is detrimental to health
- ? Wind turbine noise is more annoying than other forms of noise
- ? Wind farm companies deny the problem in spite of numerous complaints
- ? 33 homes within 930metres of a turbine – the distance from a turbine which caused serious problems for a family in Lincolnshire where the turbines were smaller
- ? Many professional bodies recommending minimum of 1.5km offset
- ? The planning application should be rejected as a precautionary measure to protect the health of local residents

3.5.1 To date, wind farms have been placed in areas of low population density. Consequently, there are no major studies of health impacts. Wind farm developers use this to claim that there is no evidence that wind farms affect health but equally there is no evidence to prove that they do not. It may well be that the cause and effect will not become apparent for a number of years as with some other medical problems, e.g. tobacco and asbestos.

3.5.2 The same or similar symptoms are being reported all over the world by people living close to wind turbines. These include:

- ? Sleep problems: noise or physical sensations of pulsation or pressure make it hard to go to sleep and cause frequent awakening. Chronic sleep disturbance is the most common symptom.
- ? Headaches, which are increased in frequency or severity.
- ? Dizziness, unsteadiness and nausea.
- ? Exhaustion, anxiety, anger, irritability and depression.
- ? Cognitive problems with concentration and learning.
- ? Tinnitus (ringing in the ears).

3.5.3 Dr Amanda Harry, a Plymouth G.P., studied the people who lived near the Bears Down wind farm and found that 93% had been adversely affected by the turbines and 70% were having problems sleeping and suffering anxiety symptoms.

3.5.4 Also in the UK Dr Barbara Frey and Peter Hadden undertook detailed analysis of the acoustic radiation caused by wind turbines, as well as the health effects from noise. *"Primarily, the consequent health response includes sleep deprivation and the problems that ensue as a result."* In addition, they reviewed research about the body's response not only to the audible noise, but also to the inaudible components of noise that can adversely affect the body's physiology.

3.5.5 An increasing body of evidence now demonstrates that wind turbines have the potential to affect the health of local residents. These problems are reported to be the result of the noise generated by the turbines. There are few medical groups dedicated to researching this area, but those which are, are in agreement that wind turbines are associated with a risk to health.

3.5.6 The sound from a wind turbine can be divided into audible noise and sub-audible noise or infrasound. The turbulence produced by the blades rotating at up to 180mph will create a rhythmic "whoop, whoop" sound occurring every 1-2 seconds and is the sound that is thought to cause Wind Turbine Syndrome (WTS). Dr. Nina Pierpoint's work in the USA on WTS has recently been reported in the Independent and her book is due out shortly. This sound is louder at night and has been shown to disturb residents 1.2 miles away from wind turbines in regular rolling terrain but at greater distances in valley terrain.

3.5.7 Not everyone near turbines experiences these symptoms. It is thought some people are more susceptible than others because of the presence of risk factors such as migraine or age related changes in the middle ear. Sensitivity to low frequency vibration has also been reported as a risk factor but is highly variable in people and, hence, poorly understood and the subject of much debate. Participants in noise studies are usually selected from the healthy adult population. Vulnerable groups such as the elderly, young children or children with developmental and learning disabilities are seldom represented and may show effects at lower levels of noise.

3.5.8 Wind turbines also produce low frequency sound which is also known as infrasound. Long-term exposure to low frequency sound is thought to cause vibroacoustic disease or VAD. In simple terms, this is a multi-system disease which causes structural changes in the heart (thickening of the pericardium – the membrane which covers the heart), the lungs (lung fibrosis), the blood vessels (thickening of the wall causing a narrowing of the lumen) and nervous system.

3.5.9 In Portugal Professor Dr Mariana Alves–Pereira has undertaken research into the effects of exposure to low frequency vibration and identified a set of resultant medical symptoms. The research has demonstrated that wind turbines in the proximity of residential areas produce acoustical environments which can lead to the development of VAD in residents. Low frequency noise may not be heard but that does not mean that it does not cause disturbance to humans.

3.5.10 The human body is not aware through any feeling or sensation if it exposed to X-rays but it is well known that exposure can cause harm. The same applies to acoustic radiation. Research points to a causal link between unwanted sound and sleep deprivation and stress, i.e. whole body physiologic responses. In the context of Human Rights, it can be contended that environmental noise pollution destroys a person's quiet enjoyment of their home, a violation of Article 8 of the Human Rights Act 1998.

3.5.11 The UK Wind Industry and DTI (now BERR) response was to conduct their own research from which they concluded that measured *"internal noise levels were insufficient to wake up residents at these three sites. However, once awoken, this noise can result in difficulties in returning to sleep."* The lack of physiological expertise in the investigators in not recognising that noise can disturb sleep without actual recalled awakening is a major methodological flaw rendering the conclusions unreliable, as does the short recording period.

3.5.12 The evidence to date persuaded France's National Academy of Medicine in March 2006 to call for a minimum of 1.5km distance between turbines and residential areas, although work suggests this distance needs to be increased in certain terrains. Interestingly in late 2007 the French Government stated that they were now opposed to the development of wind farms in rural areas because of the adverse impact on the landscape and rural life.

3.5.13 In summary, the research performed to date by independent specialists suggests wind turbines have the potential to cause significant health problems. The UK Noise Association suggests a separation distance of 1 mile. The Scottish Executive introduced in 2007 supplementary planning guidance recommending a 2km separation distance.

3.5.14 Given that the proposed wind farm would have turbines only some **650m** away from the nearest property, then the risk of local residents experiencing health problems is too great for approval without a rigorous investigation. Sleep deprivation and the ensuing health related problems represent a total threat to the quality of life of those local residents unfortunate enough to live close to the turbines.

3.5.15 This is highlighted by the experience of the Davis family who had to move out of their house in 2007 because a wind farm was commissioned 930m away. The wind farm comprised 8 x 100m turbines. This wind farm comprises 14 larger turbines and has approximately 33 homes at 930 metres or less from a turbine.

3.5.16 There are so many reports from people saying that their health has declined after wind turbines were erected for there not to be cause for concern. The reaction of many "expert bodies" is to recommend a minimum offset of either 1.5km or 2km.

3.5.17 In the interest of public health, turbines should not be erected within 1.5km of dwellings. Relevant planning guidance is as follows:

***PPS22***

3.5.18 PPS22 was promulgated subsequent to ETSU-R-97 and should therefore take precedence. Section 41 states: *"Development proposals should demonstrate any environmental, economic and social* benefits *as well as how any environmental and social impacts have been minimised through careful consideration of location, scale, design and other measures"* and *"Local planning authorities should ensure that renewable energy developments have been located and designed in such a way to minimise increases in ambient noise levels."*

Proposals which seek to place turbines within 1.5km of habitation have not sought to minimise environmental and social impact by wind turbine noise and its effects on sleep and health and are therefore in contravention of PPS22.

***Companion Guide to PPS22***

3.5.19 The Companion Guide to PPS22 states: *"RE 3 describes Factors to be considered in Planning for Wind Farms. These include: residential amenity (on noise and visual grounds); safe separation distances"* and *"Well-specified and well-designed wind farms should be located so that increases in ambient noise levels around noise-sensitive developments are kept to acceptable levels with relation to existing background noise."*

Proposals which site wind turbines within 1.5km of habitation will not keep wind turbine noise to an acceptable level and are therefore in contravention of PPS22.

***PPS23 Planning and Pollution Control***

3.5.20 PPS23 states:

*"… the precautionary principle should be invoked when:*

- *there is good reason to believe that harmful effects may occur to human, animal or plant health, or to the environment*
- *the level of scientific uncertainty about the consequences or likelihood of the risk is such that best available scientific advice cannot assess the risk with sufficient confidence to inform decision-making."*

## Conclusion

**3.5.21 The precautionary principle must apply and the planning application should be rejected to avoid exposing local residents to suspected health risks.**

## 3.6 OBJECTION - GREEN BELT

- The site abuts the Green on two sides – South and the West
- The view of the Green belt from Hillam, Monk Fryston, Gateforth, Hambleton and West Haddlesey will have turbines interposed.
- The view through the Green Belt from Beal, Kellington, Birkin, Byram, Burton Salmon and Poole will be dominated by turbines which would border the Green Belt.
- The scale, location and visual appearance of the wind turbines will detract from the open character of the landscape.
- The turbines are each more than twice as high as the pylons on the Green belt boundary and there are two lines of them .

3.6.1 The Government position on Green Belt is very clearly laid out in PPG 2 which states:
*'The Government attaches great importance to Green Belts, which have been an essential element of planning policy for some four decades..... They help to protect the countryside, be it in agricultural, forestry or other use....*

*The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open and the most important attribute of Green Belts is their openness which checks the unrestricted sprawl of built-up areas and prevents neighbouring towns from merging into one another.'*

3.6.2 PPG2 also states that:
*'Once Green Belts have been defined, the use of land in them has a positive role to play in fulfilling the following objectives:*

- *to provide opportunities for access to the open countryside for the urban population;*
- *to provide opportunities for outdoor sport and outdoor recreation near urban areas;*
- *to retain attractive landscapes, and enhance landscapes, near to where people live;*
- *to secure nature conservation interest; and*
- *to retain land in agricultural, forestry and related uses.*

*The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved, except in very special circumstances.'*

3.6.3 The Selby Local Plan re-affirms the stated policy of the Government and states the following:
*'Once taken for development, the countryside cannot be easily replaced or restored. Sporadic development in the countryside can not only lead to a cumulative change to the character of the countryside but is unsustainable in both economic and environmental terms. The protection of the countryside from inappropriate development is therefore a fundamental objective of the Local Plan*.

*Whilst landscape quality is not a material factor in designation, Green Belts do have a positive role to play in safeguarding attractive areas of countryside and providing opportunities for outdoor leisure pursuits and access to the countryside, and securing nature conservation interests. The essential characteristics of Green Belts are their permanence and open appearance, and their protection must be maintained as far as can be seen ahead. '*

3.6.4 GB4 of the Selby Local Plan confirms that:
*'Proposals for development in the Green Belt, or which are conspicuous from an area of Green Belt, will only be permitted where the scale, location, materials and design of any building or structure, or the laying out and use of land, would not detract from the open character and visual amenity of the Green Belt, or the form and character of any settlement within it. …. proposals located beyond, but conspicuous from, the Green Belt may have an adverse effect on areas of Green Belt. In such circumstances PPG2 (Green Belts, 1995) indicates that it would be appropriate to resist development.'*

3.6.5 DL1 of the Selby Local Plan states:
*'Development in the countryside, outside the Green Belt and development limits, will only be permitted where the proposal complies with all other relevant policies and the proposal:*
*1) Would be appropriate in a rural area; or*
*2) Involves the re-use, adaptation or extension of an existing building; or*
*3) Is required to meet the identified social or economic needs of a rural community; or*
*4) Would be of direct benefit to the rural economy including additional small-scale employment development and the expansion of existing firms.'*

3.6.6 SG1 of the Selby Local Plan states:
*'Proposals for development affecting Strategic Countryside Gaps, as defined on the proposals map, will not be permitted where there would be an adverse effect on the open character of the countryside or where the gap between settlements would be compromised….. important areas of open countryside between settlements, or 'Strategic Countryside Gaps', have been identified where stricter controls are necessary to safeguard the open character of the land. In a number of cases Strategic Countryside Gaps have been identified in order to maintain the individual character of different parts of settlements. Strategic Countryside Gaps have been defined in respect of the following settlements: …. Gateforth….*

*Proposals for development in these gaps will only be acceptable where there would be no risk of* physical *intrusion such as certain types of recreational use, or where the overall open character of the land would be enhanced through the removal of existing structures. In such circumstances, any replacement or ancillary buildings would need to be sensitively sited and landscaped in order to minimise any potential intrusive impact.'*

3.6.7 The Applicant claims in their planning statement (Para 18.4):
*'The proposed wind farm would be a large scale element within a large scale landscape, the turbines being seen as clean, simple structures with a*

*form closely related to function. They would appear as graceful and elegant features of the landscape fabric, with a high degree of transparency. The proposal has minimised adverse impacts on existing communities and respects the key features and character of the landscape, and significant effects on visual receptors will be limited. It is further concluded that the proposal would not detract from or harm the West Yorkshire Green Belt.'*

3.6.8 We dispute this claim and point out that wind is universal and can be harvested anywhere. There is absolutely no reason why these wind turbines have to be located on this site which abuts Green Belt on two sides. Indeed we will show that this area, being of low wind speed, is a relatively poor place to maximise the generation of electricity from wind. There is nothing in the ES which shows any attempt to mitigate against the impact on the Green Belt.

## Conclusion

**3.6.9 This application is contrary to national and local planning policies in the following ways. The visual amenity from the Green Belt will be severely damaged by the construction of this wind farm. It will be conspicuous from the areas of the Green belt described above. This is specifically proscribed in both national and local planning policy. Severely reducing the visual amenity of the Green Belt areas will have a damaging effect on the reasons why Green Belt areas have been established, such as providing opportunities for outdoor sport and outdoor recreation near urban areas. The walkers, cyclists and horse riders who pursue these activities in the area will either suffer reduced pleasure or will reduce in numbers as a consequence.**

## 3.7 OBJECTION - LOSS OF RESIDENTIAL AMENITY

- Noise levels up to 40dB predicted for many dwellings
- Most of Birkin and Gateforth to be exposed to noise levels above 37dB
- Some homes with 13 turbines within 2km
- Over 50 dwellings within 2km of turbines have visibility from their garden or home

### Residential Receptors

3.7.1 In planning law there is no right to a private view. However, at a Public Inquiry at Brent Knoll[4] the Inspector concluded that:
*"However, private and public interests may coincide where a proposal would have such a severe adverse impact on the outlook of a property that it would make it a significantly less attractive place to live, as perceived by a reasonable observer without strong views for or against the type of development in question. In such a situation protecting the amenities of a dwelling may be a legitimate and material planning consideration. In other words the issue is not whether the properties become "unliveable" but whether they become significantly less attractive places to live."*

3.7.2 There is virtually no analysis within the ES on the impact on the visual amenity of local properties, even though the ES admits that high sensitivity receptors, which include local residents, within 5km, will experience a significant change in their view where they acquire a clear and relatively unobstructed view of the turbines. There are thousands of people living within 5km, who might have significant impacts on their views, but there has been no attempt to quantify what proportion will be so affected.

3.7.3 As has been pointed out above, the Brent Knoll judgement means the turbines do not have to be overbearing to represent an unacceptable adverse impact and indeed the judgement went on to say:
*"The motion of the blades would in my view be persistently intrusive and potentially disturbing seen from the closest dwellings with a view of the proposal."*

### Visual Impact from Dwellings

3.7.4 In para 7.27.1 of the ES the Applicant states:
*"From relatively close locations, there would be a range of views from open to predominantly screened but the movement of the rotors would be prominent, attracting attention by their contrast with the more static qualities of the immediate landscape. …… The introduction of relatively large vertical features would represent a substantial change in the landscape character of the site and its immediate context. The open undeveloped character of the site will change to predominantly arable farmland with wind turbines incorporating the movement of rotating blades, being visually permeable, retaining a high degree of openness and avoiding perceptions of densely massed turbines".*

[4] APP/V3310/A/06/2031158

3.7.5 The Applicant then goes on to say:
"*Within the wind farm and in close proximity to the proposed turbines, perhaps up to 800 metres or thereabouts from the proposed turbines, the landscape type would be changed into a wind farm landscape, where the wind turbines would be the principal determining element of landscape character. Beyond this range the wind farm would give rise to a local characterising influence on landscape character. It would be one of the key elements of landscape but not the key element that determines character. Hence a landscape sub-type would arise in the local area without eroding the underlying characteristics of the wider area. The new landscape sub-type would represent a modification rather than a transformation of character. Given a landscape quality of generally medium to low the effect of the proposed wind farm on the landscape character and quality of this landscape type would potentially be between a major and major / moderate significant effect within a 2.5-3 km radius.*"

3.7.6 Later, in para 7.30 the Applicant says:
"*Views of the proposed development would be experienced from individual dwellings and farmsteads in the surrounding area, as detailed in Volume 4 (Part A), Appendix 7.3. The orientation of the dwellings, local topography and intervening vegetation/adjacent settlement combines to reduce the potential visibility of the wind farm. Furthermore, field survey observations have confirmed that the total number of individual properties where a significant visual effect may be experienced is relatively small compared to the overall population in the surrounding area. While acknowledging that significant effects may arise in the private context, it is considered that the overall change in visual amenity would not be unacceptable, given the separation distance from proposed turbines and in general the restricted nature of views from dwellings in the local area.*"

3.7.7 The assertion that if only a few people suffer a significant effect the application may be deemed satisfactory is in itself unacceptable; however the number of homes where the turbines will be visible from both the house and its garden is substantial.

***Beal***

3.7.8 This village is about 2.3 km south of the wind farm site. The 14 turbines will all be visible from Beal and will be seen stretching across the field of view the villagers currently enjoy towards Hambleton Hough and Brayton Barff. Visually the turbines will fill the space between the road to Birkin and the bank of the River Aire, a 55 degree angle. While homes on the north side of the village are most likely to be affected, the walk along the river bank is enjoyed by many villagers and the turbines will be visible from all the way along. About 20 homes will have a clear view of the turbines and another 17 will have views to some of them. Of these only about 7 will have clear views from their gardens because Beal is behind a grass flood defence bank. However, many of the riverside homes are arranged so that the owners can see the River Aire over the bank and enjoy the view to the north over the Green Belt. This amenity would be lost.

***Birkin***

3.7.9 The nearest two homes are at 650 metres from proposed turbine number 2. Both homes have clear, uninterrupted views to 6 or more turbines from the house and the garden. In total there are 39 homes in Birkin and the remainder of them are between 800 metres and 1.4 km from the nearest turbine. Not all homes will have a view of turbines due to the woodland area, but 18 will be able to see those turbines which are closest to the village from their home and from their garden. Nine more of them will have partly obscured views. However all residents will experience the close proximity of the turbines every time they leave the village or return to it. All routes in and out have clear visibility of turbines and two routes pass within 300 metres and 450 metres of turbines respectively.

3.7.10 The noise contour map shows that the two closest homes have a predicted noise level of up to 41dB while it is 39dB for the centre of the village. Not only will the villagers see the turbines, they will also hear them and will be in shadow from them early in the mornings in summer.

***Gateforth***

3.7.11 The Applicant states:
*"Due to the proximity of the proposal and extent of views within the hamlet, there would be the potential for a significant effect on most dwellings within this hamlet."*

3.7.12 The worst impact will be along Hillam Road where homes face south towards the proposed wind farm. The homes are about 950 metres from the nearest turbine. There are about 50 homes in the village; 24 of them will have a clear view to at least one turbine. Another 15 will be able to see turbines but they may be partly obscured. While Staker Wood and Gateforth Wood are both south of the village the trees are not tall enough to prevent the turbines from being seen. From much of the village there will be a clear view through the gap between the woods to turbine 11. The rotating blades of other turbines will be seen rising above the top of the trees. At certain times of the year the village will see the sunset through rotating turbines.

3.7.13 The predicted maximum noise level for the village is between 37 and 39dB. However the village is downwind of the site and this could cause increased noise levels. In any case 37dB is above background noise now that the pipeline construction has been completed.

3.7.14 Residents of Gateforth will see turbines very prominently over Gateforth Wood as they enter their village from Selby and will have to drive past them for nearly 3 km if they approach or leave in the direction of Leeds.

***Hambleton***

3.7.15 While the majority of residents of Hambleton will see the proposed turbines on their way to and from the village, those who reside along Westcroft Lane at the south side will have a view of all 14 of them either in full or over the top of Gateforth Wood. There will be two rows of 7 turbines which will be rotating with no synchronisation of angle or rotation speed. They will be spread across a 53 degree angle. This will affect about 20 homes and the

turbines will be visible from the homes as well as the gardens. The nearest row of turbines is about 2.25 km distant.

***Hillam and Monk Fryston***

3.7.16 Houses on the eastern side of the villages will be most affected, but the turbines will also be clearly visible from Betteras Hill. Approximately 26 homes will have a clear view of turbines from their home and its garden, while another 22 will have a partial view. The nearest turbine is about 2.5 km from the high point in the village. All residents of the village will suffer loss of recreational amenity as described elsewhere. The road network around the wind farm site is popular with many recreational cyclists from the village.

***Hillam Common Lane***

3.7.17 While the Applicant makes little more than passing reference to properties on Hillam Common Lane these dwellings will be seriously affected. Two have 13 turbines within 2 km, two others have 10 or more within 2 km. The houses all face south and have views to the wind turbines, which may be as close as 760 metres to residential curtilege. During the construction phase the homes at the western end will have all the construction traffic including the exceptional loads passing directly by their homes.

3.7.18 The predicted maximum noise level of 40dB is cause for serious concern because this is more than 5dB above background noise at the properties other than at the time of harvesting and heavy ploughing. During winter the rotor blades will cast a shadow over the homes and the front gardens. Several of the homeowners are retired and enjoy gardening, even in winter. The pleasure of this is enhanced by the quiet environment. While there is occasional traffic and light aircraft the noise is not intrusive or continuous. Wind turbine noise of up to 40dB is known to be very annoying and in cases where such noise has been the subject of complaint by residents at other wind farms it has rarely been resolved to the satisfaction of the residents.

3.7.19 With reference to these properties we make the following points:

- Amarna – new property with clear views over the wind farm site.
- Sandkim Farm – retired owners, keen gardeners. Home, patio area, pond and front garden all have views to some of the proposed turbines.
- Maspin House – all windows look out over the wind farm site and turbines will be visible from each bedroom, the landing and kitchen windows. More turbines will be seen from the front garden.
- Maspin Grange – owners retired, spend much of their time in the conservatory on the south side of the house. Views to the wind farm site over low garden hedge. Turbines will be visible.
- Whitelands, The Oaks and Hagg Farm – these homes have the most turbines within 2 km. While the base of the turbines may be obscured the rotor blades will be visible (the top of the 80 m test mast is clearly visible). Seeing just the top of the rotors could be more obtrusive than the whole of the turbine.
- Brecks Farm – there are three residential properties on this site and they will all see the tops of the turbines. There are no agricultural buildings on the site.

The Applicant has not produced a photomontage from any of these locations.

***Poole and Burton Salmon***

3.7.20 These villages are linked together and about 4 km from the nearest turbine. It is a feature of the area that there are long-distance views and the dwellings on the east side of the village will all have views to the wind turbines. The turbines will not be visible from some homes due to hedges in the village. The turbines will be visible from about 20 houses and will be visible from one of the two approach roads into the village.

***West Haddlesey***

3.7.21 Four homes at the western end of the village will have direct views to the turbines. The turbines will be in line with summer sunset and the maximum noise predicted is 39dB. All villagers will experience the close proximity of the turbines if they drive out of the village in the direction of Birkin with one turbine within 400 metres of the road.

## Conclusion

3.7.22 The impact at each corner of the development would be that "*the landscape type would be changed into a wind farm landscape"* to use the phraseology used by the Applicant. This would apply equally to each village, and due to the proximity of turbines to the road around the site would apply to the site as a whole. The four surrounding villages and the site would blend into one "*wind farm landscape".*

**3.7.23 This scheme should be refused on the grounds of the dominating visual impact on residential amenity of the four surrounding village communities.**