

SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

REPORT TO: Development and Conservation Control Committee

6th April 2005

AUTHOR/S: Director of Development Services

**S/1663/04/F- Boxworth and Conington
Wind Farm Comprising 16 Wind Turbines, Anemometry Mast, Substation and
Associated Infrastructure, Land South West of Huntingdon Road (A14 Trunk Road) in
the Parishes of Boxworth and Conington for Cambridge Wind Farm Ltd**

Recommendation: Refusal

Date for Determination: 30th November 2004

Members will visit the site on Monday 4th April 2005.

Site

1. The 296 hectare application site is located adjoining and to the south west of the A14 Trunk Road. To the north west it extends to New Barns Farm; to the south west to public bridleway between Conington and Boxworth; and to the south east to the C184 Boxworth to Swavesey Road. At its maximum the site is approximately 2.85km long and 1.5km wide.
2. The site comprises largely arable agricultural land rising from 10m ODN in the north corner to a maximum elevation of 40m. ODN close to the south west boundary. The elevated spur of high ground has open easterly, northerly and westerly aspects.
3. Within the site lies Friesland Farm. Outside the site boundary lie Grapevine Cottages, Boxworth (some 300m distant), The Rectory (Boxworth House), Boxworth (some 400m distant), The Trinity Foot Public House and Cambridge Services of the A14T Swavesey interchange, New Barns Farm, Conington (adjacent the boundary), Marshalls Farm and four dwellings on the east side of Elsworth Road, Conington (some 500m distant). The closest points of the village frameworks of Conington and Boxworth villages are some 600m and 500m distant respectively. All distances are approximate to the application site boundary.

The Proposal

4. The application, received on 10th August 2004, proposes:
 - 16 wind turbines each consisting of 60m high tower and 40m blade (x3) giving an overall tip height of 100m
 - 60m high anemometry mast
 - Substation (9.85m x 5.35m x 5.2m high)
 - Temporary construction compound and new site access from the C184 road
 - On-site access roads
5. The application is accompanied by an Environmental Statement (ES), which describes the proposal, and a Planning Appraisal. Section 2, "Environmental Assessment," of the ES Non Technical Summary is attached as an appendix.

6. Each turbine has the capacity to generate up to 2 MW of electricity to provide a total installed capacity of 32 MW. The expected life of turbines is 25 years.

History

7. **S/1045/03/F** – 50m high anemometer mast approved (4th July 2003) at land at New Barns Farm, Conington for a limited period expiry 31st July 2005.

Policy

National Guidance

8. **Planning Policy Statement (PPS) 1 (2005)** aims to facilitate and promote sustainable and inclusive patterns of urban and rural development. It confirms that the Government is committed to protecting and enhancing the quality of the natural and historic environment, in both urban and rural areas.
9. **PPS 7** aims to promote more sustainable patterns of development by protecting the countryside for the sake of its intrinsic character and beauty, the diversity of its landscape, heritage and wildlife, the wealth of its natural resources and so it may be enjoyed by all [para. 1 (iv)]. It advises that, in determining planning applications, authorities should provide for the sensitive exploitation of renewable energy sources in accordance with the policies set out in **PPS 22**.
10. **PPG 9** sets out Government's objectives for nature conservation.
11. **PPG 15** provides guidance in respect of development which will affect the historic and built environment.
12. **PPS 22, "Renewable Energy"** (August 2004) replaced PPG 22. It aims to increase the development of renewable energy resources. Amongst key principles are:
 - 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.
 - The wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission.
 - Small-scale projects can provide a limited but valuable contribution to overall outputs of renewable energy and to meeting energy needs both locally and nationally. Planning authorities should not therefore reject planning applications simply because the level of output is small.
 - 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.
13. **"Planning for Renewable Energy: A Companion Guide to PPS 22"** (2004) identifies the key issues in determining planning applications. At para 5.10 authorities are advised to come to an objective view on:

- The extent to which the project is in conformity with the development plan;
 - The extent to which the reasons for any area based designations may be compromised;
 - The extent of any positive or negative impacts, and the means by which they may be mitigated, if negative; and,
 - The contribution towards meeting the regional target, but recognising that a small contribution cannot be in itself a reason for refusal of permission.
14. The Companion Guide includes a very detailed technical annex upon wind.
15. **PG 24 “Planning and Noise”**, states that noise can be a material consideration in the determination of planning applications. Development should not cause an unacceptable degree of disturbance.
16. **Regional Planning Guidance (RPG6) for East Anglia** supports renewable energy developments in appropriate locations. **Policy 60** indicates that small-scale schemes may be suitable in many rural areas.
17. The emerging **East of England Plan** (Draft revision to the Regional Spatial Strategy), December 2004, requires Local Development Documents to contain policies for promoting and encouraging energy efficiency and renewable energy. It contains a target of 10% of the region’s electricity to be provided by renewable resources excluding offshore wind by 2010.
18. Structure Plan 2003 Policies of relevance:
- **P1/2 Environmental restrictions on development**
 - **P1/3 Sustainable Design in Built Development**
 - **P7/1 Sites of Natural and Heritage Interest**
 - **P7/2 Biodiversity**
 - **P7/4 Landscape**
 - **P7/6 Historic Built Environment**
 - **P7/7 Renewable Energy Generation**
19. Local Plan 2004 Policies of relevance:
- **EN1 Landscape Character Areas**
 - **EN3 Landscaping and design Standards for New Development in the Countryside**
 - **EN4 Historic Landscapes**
 - **EN5 The Landscaping of New Development**
 - **EN8 Natural Areas**
 - **EN12 Nature Conservation: Unidentified sites**
 - **EN13 Protected Species**
 - **EN15 Archaeology**
 - **EN28 Development within the Curtilage or Setting of a Listed Building**
 - **EN30 Development in Conservation Areas**
 - **EN44 Supports Proposals for the Use of Renewable Energy Resources Subject to other Polices in the Plan**
 - **ES6 Noise and Pollution**

20. **Emerging Local Development Framework (LDF)**

The LDF is not statutory policy but its emerging policies considered at the Special Council Meeting on 15th March 2005 are likely to be put into the LDF and to be adopted on 9th May 2005. In respect of renewable energy, **Policy NE/2** and the supporting text states:

Policy NE/2

“The District Council will grant planning permission for proposals to generate energy from renewable sources, subject to proposals according with the development principles set out in DP/1 – DP/4 and complying with the following criteria:

- a. The proposal can be efficiently connected to existing national grid infrastructure;
- b. The proposal makes provision for the removal of the facilities and reinstatement of the site, should the facilities cease to be operational.

[Text from Paragraphs 8.6 - 8.8 inclusive]

Given the commitment by Government and the District Council to reduce the use of fossil fuels, opportunities to increase the proportion of energy, especially electricity, generated from renewable sources will be permitted unless there is clear adverse impact on the environment or amenity of the area.

In South Cambridgeshire, with greater than the UK average levels of sunshine, solar power can make a significant contribution. The District Council will seek the incorporation of measures such as solar panels or electricity generation from photovoltaic cells in new or converted buildings and structures.

Individual or small groups of wind turbines may also be appropriate. However, large wind farms would be likely to compromise the need to maintain the quality of the historic and natural landscape, which is an important part of the attractiveness of the area and underpins its economic vitality.”

21. The Development principles set out in DP/1 – DP/4 deal with issues relating to sustainable development, design, a checklist for development criteria and infrastructure demands.

Consultations

22. **Boxworth Parish Meeting** objects, (75 votes against, none in favour and one abstention). In summary the reasons are:

- Out of scale with and dominate the landscape
- Detract from setting of several Listed Buildings and the Conservation Area (NB. There is not a Conservation Area in Boxworth)
- Noise pollution in close proximity to several villages
- Distraction to drivers on the A14 Trunk Road
- Wildlife protection has not been fully addressed
- Not the best way to attain important CO2 reduction targets
- The ES lacks impartiality and rigour

A full copy is attached.

23. **Conington Parish Meeting** objects, (70 votes against, 4 in favour and one abstention). In summary the reasons are:

- Noise impact
- Distraction to motorists on the A14
- Shadow flicker to nearby properties
- Eviction of residents from New Barn Cottages would be against their will
- Unacceptable impact on bird life, particularly golden plovers
- Risk to badgers, bats and great crested newts
- Industrialisation and desecration of rural landscape
- ES provides misleading statements
- Non-inclusion of local people at the earliest opportunity
- Vehicle movement problems on local roads during construction

A full copy is attached

24. **Elsworth Parish Council** objects:

“It is the Parish Council’s view, supported by a questionnaire completed by over 60 households (in excess of 20% of the homes in Elsworth), that whilst there is support for renewable energy resources such as wind power there is little support for the proposed wind farm between Boxworth and Conington.

The main objections of the residents are the impact on the landscape and communities in terms of noise and visual intrusion as well as possible health hazards. There is also concern as to the potential damage to wildlife, the additional risk it may cause to an already hazardous A14 and the progressive development of the A14 corridor (Northstowe, Extra Services, Buckingham Business Park and now a wind farm). Sixteen 100-metre turbines will be totally out of scale and a massive intrusion into our rural landscape.

It has also been noted that on one of the maps in the planning application Elsworth is not attributed with any listed buildings. Please note that Elsworth is rich with listed properties as well as extensive conservation areas.”

25. **Knapwell Parish Meeting** objects:

“The Knapwell Parish Council, whose planning committee has given careful consideration to this application and who agree there is a need to develop sources of renewable energy, totally oppose this application on the grounds that the site considered is emphatically in the wrong location.

The area under consideration is far too densely populated and the site is too near to domestic buildings and would cause disturbance and possible health problems to residents. The seriously overpowering visual impact for those living in neighbouring villages is unacceptable, as is the certainty of continuous excessive noise levels.

It would become a distraction to drivers on an already heavily congested main trunk road, the A14, likely to add to the daily toll of accidents.

Knapwell is a designated conservation area, first designated in 1989. The important setting of fields and trees outside the boundary falls within what was an area of best landscape (designated by South Cambridgeshire Local Plan) and a site of Special Scientific Interest (designated by central government and protected under nature

conservation law). In the appraisal document KNAPWELL CONSERVATION AREA 28.9.2000 it states: "Views into, out of, and within this area are considered important, the loose texture and rural character are identified as the defining characteristics of this conservation area."

This planning application cannot possibly meet these criteria."

26. **Lolworth Parish Meeting** objects:

- a. "We support green energy but believe off shore wind farms have less impact on the quality of life and are more efficient.
- b. We are particularly concerned about its proximity to the A14. We regularly suffer from being unable to enter or exit the village without experiencing significant delays, since the A14 is our only means of access. Serving police officers, while unwilling for obvious reasons to put their concerns in writing, have confirmed our fears that the visual impact of these turbines will distract the attention of motorists. We should be doing all in our power to reduce the carnage on this stretch of road, not adding to it.
- c. Noise pollution is a major concern of many. We already experience significant noise from the A14 and to add to it, particularly as it seems this will inevitably increase when the road is upgraded, will have serious consequences.
- d. Visual impact on the village
- e. Adverse effect on the value of local properties."

27. **Bar Hill Parish Council** objects

"..because of considerable loss of quality of life, visual and noise intrusion, also loss of amenity value. Safety issues as close to A14 as drivers will automatically slow down to look at the intrusion. House values will drop. Also too large an area to be taken away from residents."

28. **Swavesey Parish Council** objects.

"Environmental impact on the surrounding landscape and residential areas. This includes the visual impact the turbines will make, potential hazard to wildlife and construction impact on the rural area.

Proximity of the site to the A14. The A14 is one of the most busiest and dangerous stretches of highway in the country, particularly between Huntingdon and Cambridge. The potential distraction the turbines will cause to motorists is considered to be an unacceptable risk.

Noise Pollution. From information received from Stop CWF it is considered that the impact of noise pollution on Swavesey village would be unacceptable."

29. **Over Parish Council** objects:

"Concerns regarding noise and visual intrusion on Over. Also concerns over the impact this distraction will have on drivers using the A14 along this already accident ridden stretch of road."

30. **Longstanton Parish Council**, supports the concept of renewable energy, but objects to this application.
- “1. The negative impact on the countryside when compared to the small gain in useable power. This is a marginal area for wind energy.
 2. The visual intrusion on a rural landscape caused by these huge wind turbines.
 3. The site is close to the existing A14 and will be even closer to the proposed ‘new A14’ and will be distracting to drivers, especially with ‘shadow/flicker’ from the sun’s rays being cut by the blades. The Parish Council believes that there is likely to be an increase in road traffic accidents on the A14 as a result, and there are an already high number of such accidents. The village suffers when there is an accident on the A14 as drivers try to use local villages as an escape from the delays on the A14 caused by these accidents and is currently having traffic calming measures installed under the ‘A14 Villages Scheme’.
 4. Problems with radar cover for air traffic caused by the turbines.
 5. Noise from the turbines to adjacent villages will be significant and the noise footprint indicates that parts of Longstanton (Home Farm development in particular) will be affected to about 30dB which, according to the WHO is the maximum for a good night’s sleep. Noise from the A14 can be heard in Longstanton now; will the residents have to suffer more noise?
 6. There will be interruption to TV signals in the vicinity of the Turbines and Longstanton could be affected.
 7. There is cause for concern at the possible destruction of wild life, especially birds, in the area.
 8. Ice is known to form on blades during very cold windless periods and this ice could be thrown off the blades when later rotating to produce power. Ice could be thrown some distance and there will be roads (A14) and dwellings close by.
 9. There is concern that there will be little local benefit from this development. The turbines will not be built in the area, monitoring will be done remotely, etc.”
31. **Papworth Everard Parish Council** supports the concept of renewable energy, but objects to this application. In summary the reasons are:
- a. Size overwhelming residents of Boxworth and Conington.
 - b. Distraction to drivers on the A14.
 - c. Contrary to Structure Plan, Local Plan and emerging LDF policies.
- A full copy is attached.
32. **Dry Drayton Parish Council** objects (no reasons given).
33. **Childerley Parish Meeting** comments:

“We decided that this wind farm would have no direct impact on Childerely and that therefore we should make no direct recommendation one way or the other.

- a. In general we think it is an extremely expensive and inefficient way to produce electricity.
- b. It is clearly detrimental to the countryside as countryside (although not everybody would agree).
- c. The noise nuisance for houses close to the windmills would almost certainly be severe.
- d. Some concern was expressed about the proximity of the A14 and the dangerous distraction which the windmills might cause.
- e. Notwithstanding all this there was considerable support for the project.”

34. **Oakington and Westwick Parish Council** supports:

“ The Parish Council is very supportive of this application. Before steam power and the internal combustion engine, windmills were the prime source of power to drive flourmills and water pumps in this area, and so such things are not alien. Society has to find ways and means to satisfy its ever-increasing demands for energy and recognise that our oil and gas supplies are being exhausted at an alarming rate. We have been fortunate to have been able to enjoy the benefits of a mains electricity supply from sources at distant parts of the country, at the expense of those who have to put up with the associated adverse environmental conditions and risks that coal fired and nuclear power stations create. Nothing in this world is perfect, but wind turbines have many more advantages than disadvantages and many regard their stylish appearance and gentle motion as an asset in a landscape which has few features to commend it.”

35. **Fen Drayton Parish Council** objects. In summary the reasons are:

- a. Significant adverse visual and audible impact.
- b. Scheme would not integrate with existing landscape features nor conserve local landscape character.
- c. Change from rural to industrial landscape.
- d. Distraction to A14 road users thus increasing the high number of accidents.
- e. Landscape and visual assessment has not been carried out from the village of Fen Drayton
- f. Lack of noise monitoring from Fen Drayton, which is in-line of prevailing south westerly winds. Disturbance, discomfort and disruption to people living and working in the village.
- g. No proposals put forward to resolve poor quality television reception.

A full copy is attached.

36. **Hilton Parish Council** objects:

“Hilton is mostly Conservation Area and has 27 listed buildings. The Parish Council supports the letters sent to SCDC from Hilton parishioners, objecting to the Application, and objects itself on the following grounds:

- a. Increased risk to traffic on the A14 (strobe effect from lights through the turbines and general distraction of drivers viewing the spectacle).
- b. The precedence that more of the local attractive and highly productive agricultural land could be changed to a light industrial use.
- c. The visual and audio intrusion on neighbouring properties.
- d. Concern about the unknown effect on the internationally important golden plover roost. The species is a ‘Conservation Concern’ by the Government Biodiversity Steering Group.”

37. **Fenstanton Parish Council** objects:

- “1. The presence of the wind farm will further exacerbate congestion and be a further distraction on the A14 at a point which is already a well known accident area and increase the already poor safety record of this major trunk route.
2. The visual impact of the proposed Wind Farm will dominate a wide area surrounding the site and will be out of proportion with the surrounding landscape.
3. We believe the noise produced will be intrusive to the residents of Fenstanton which in itself will be a form of environmental pollution to the local community.

Fenstanton Parish Council fully supports sustainable energy and the construction of wind farms. The Parish Council feels other sites, that do not encroach on existing communities or raise safety issues, do exist and further consideration should be given to siting wind farms off shore.”

38. **English Nature** seeks conditions regarding:

- a. Badger mitigation - Walkover surveys prior to construction to ensure that the situation regarding badgers and reptiles has not changed in the time between the original survey and the intended construction period.
- b. Further bat surveys to be undertaken - pre-construction (May-September 2005) and once the turbines are in operation.
- c. It also requests a population and full, detailed mitigation for great crested newts to be submitted and approved before the application is determined.
- d. On the basis of the likely risk of bird collisions associated with the proposed wind farm site being low, English Nature does not object to this application in relation to birds.
- e. The application site is also less than 2km from Fen Drayton Gravel Pits, a County Wildlife Site, which is important for its breeding and wintering birds. The ES indicates to English Nature that there is not likely to be an impact on any important bird species associated with Fen Drayton Gravel Pits, as the surveys did not show any concentrations of birds of importance either using the area or flying over the site. In addition, it is unlikely that waterfowl would

be moving around the wind farm area as they will be confined to the wetland areas within Fen Drayton Gravel Pits.

- f. English Nature notes from the ES that very substantial numbers of lapwings and significant numbers of golden plover could be seen in the application area. English Nature considers that this application is unlikely to have a significant effect on either lapwing nor golden plover.
 - g. Should the application be approved English Nature proposes a number of conditions relating to the above points and also request that post-development bird monitoring is undertaken.
39. **The Wildlife Trust** is happy for English Nature and SCDC Ecology Officer to respond.
40. **Cambridgeshire Bat Group** has supplied detailed evidence to demonstrate that the impact assessment on bats in the vicinity of a wind farm is insufficient because:
- a. "There is inadequate spatial or temporal assessment of bat usage.
 - b. It does not address the issues and concerns raised by interested parties, and acknowledged by the wind power industry, regarding bats and wind turbines
 - c. On the basis of adequate assessment it should provide mitigation measures to limit bat impact to acceptable levels.
 - d. Post-development monitoring should be proposed and the results made public to ensure that mitigation has been adequate."
41. **RSPB** comments:
- a. "The application site is in an area of arable farmland that is used by nationally important numbers of golden plover, a species listed as of conservation concern under Annex 1 of European Directive 79/409/EEC on the Conservation of Wild Birds.
 - b. It is the RSPB's view that the Environmental Statement does not allow for the adequate assessment of the potential impacts of the Cambridge Wind Farm on golden plover.
 - c. The RSPB recommends that the Local Planning Authority requests further detailed survey work to be carried out to assess more accurately the likely impact of the proposed development, in particular the collision risk to golden plover and night-time use of the proposed site.

The RSPB has concerns regarding the potential impacts of this proposal on the population of golden plover although it is not possible to quantify these. Should the Council be minded to grant permission on the strength of the information currently presented, the RSPB would strongly recommend inclusion of a planning condition which incorporated:

A detailed programme of post-construction monitoring which includes a stream of work to better understand the movements of golden plover and specifically interaction between golden plover and the wind farm.

A full range of post-construction monitoring be undertaken to enable assessment of the effects of the operating wind farm on bird populations."

In an accompanying annex the RSPB states:

“The wintering bird survey of the proposed site revealed a roost of up to 7,000 golden plover, which represents nearly 3% of the national population of golden plover. As the ES correctly points out, this exceeds the threshold for nationally important populations of an Annex 1 species as defined in the SPA guidelines.

We would strongly recommend that the Council consider requesting an additional winter field season with fieldwork specifically targeted towards gaining a better understanding of golden plover movements and distribution within the area. This would enable a more definitive assessment of the potential impacts of this application on the significant population of golden plover in the vicinity.”

42. **SCDC Ecology Officer** has no objections in principle. He comments:

“I feel that the badger report is presently partially inadequate in so far that it does not detail the full mitigation measures. I accept that a strategy will have to be approved by English Nature once planning permission is granted. Nevertheless, in order to fully assess the impacts full mitigation measures should be provided within the ES (i.e. protective fencing be erected around open trenches during the construction period?).

I am slightly concerned at the proposal to undertake further nocturnal surveys for golden plover after consent is gained. If this information is required it should be presented in the ES to aid full evaluation. However, I am presently willing to accept that the wind farm is unlikely to significantly impact upon bird populations.

The measure to erect protective fencing around the great crested newt breeding pond is adequate given that the application site is largely cultivated land. The opportunity to enhance the breeding pond, and other ponds upon the site should be sought (supported by CCC Policy P7/2 Biodiversity).

Conditions Required to Address:

Impact upon breeding birds
Impact upon badgers
Impact upon great crested newts
Protection of water features
Return of land to arable (important for farmland birds)

S106 Issues:

The construction works may cause unforeseen impacts upon the local area, a legal agreement should include measures to address this.

The applicant states that they are wishing to enter into legal agreements to “...repair damage that may occur as direct result...” Any legal agreements must also include a commitment to replace hedging, return the farmland to arable production together with set-a-side land (as proposed in the ES), ensure protection and appropriate enhancement of the water environment specifically the ditches and ponds and provide biodiversity features within an agreed landscaping strategy.

A suitably qualified ecologist shall undertake a monitoring scheme, as agreed between the applicant and the local authority, for the first five years of the operation of the site.

1. The lapwings and golden plover have habitually used the site and surrounding fields for many years. The site was not used by the golden plover last year due to the crop type (winter bean). This year it is winter cereal which they tend to favour, thus a re-survey to assess the value should be undertaken, last year was just a snapshot if you like.
2. Barn owls are likely to be present just off site and tend to use the woodland edge and regenerated grassland below mast T4 for feeding. Thus possibility for disturbance during construction remains. Can T4 be removed or relocated?
3. Badger holes are more scattered and a revised winter survey may provide further data.

Further surveys should be undertaken this winter and spring to answer remaining questions.”

43. **Highways Agency** (responsible for the A14 Trunk Road) comments:

“Our main concern regarding this proposal is the extent to which it may distract drivers using the nearby A14 Trunk Road. With that in mind we asked our consultants, Faber Maunsell, to review the accident history for highways near to existing wind farm sites. They were unable to find any evidence that existing wind farms distract drivers leading to an increase in accidents. In the absence of such evidence we do not propose to issue an Article 14 direction in response to the proposed Cambridge Wind Farm.

With regard to existing conditions on the A14 we have examined the personal injury accident record on the stretch between the Girton Interchange and Godmanchester. The accident rate in the three-year period between 1st August 2001 and 31st July 2004 is low when compared to similar roads nationally. However nearly 60% of the accidents during this period involved ‘tail-end shunts’ or accidents caused by evasive action to avoid such shunts. These types of accidents are a feature of heavily congested roads such as the A14.

In the light of the existing congestion on the A14 and the high percentage of tail-end shunts we would have concerns with any proposed development that might cause drivers to temporarily avert their attention from the road ahead. We therefore provide your Authority with the following advice:

“Work should not start on the Cambridge Wind Farm until such time as the A14 between Huntingdon and Cambridge has been improved as part of the wider A14 Ellington to Fen Ditton Improvement scheme.

As you may be aware, the Ellington to Fen Ditton scheme is currently in Government’s Targeted Programme of Improvements. The next key stage will be Public Consultation on proposals for the scheme.

The reason for our advice is that the above improvement scheme will produce stable traffic flow conditions on the A14 and we feel that any temporary distraction would pose less of a risk to highway safety compared to the current unstable situation.

As a secondary issue the proposed locations of turbines T1, T2 and T3 are in conflict with our emerging proposals for the A14 Ellington to Fen Ditton scheme. We are

meeting the developer on 26th November to seek a way forward. I will write to you again to let you know the outcome of the meeting.”

In earlier correspondence with the applicant, further information was sought upon shadow flicker, and or strobe effect caused by shadows of rotor blades crossing affecting users of the A14, particularly when the sun is low in the sky.

44. **The Chief Constable** comments:

“You will no doubt be aware that I am concerned about safety and congestion on the A14 and that I am organising a meeting (date to be arranged) with a range of interested parties, including Huntingdonshire District Council, in the near future.

There has been some publicity about this issue and I have received a large number of letters and emails from members of the public. Amongst these letters I have received a number from residents concerned about the proposed wind farm adjacent to the A14 at Boxworth and Conington.

You will be aware that the Constabulary is not a statutory consultee in these matters and I have no expertise in this area. However, should there be evidence that the presence of a wind farm could impact adversely on safety on the A14, then I would be concerned.”

45. **South Cambridgeshire District Council Conservation Manager** objects:

In summary:

“I am of the opinion that the wind farm will in my opinion fundamentally compromise the area’s character by:

- a) Introducing a series of thrusting, kinetic industrial structures into this distinctive arable landscape. It is unlikely that the scale of this insertion into the landscape could be adequately mitigated, given the existing openness of the site, and the consequence would be that the wind farm would dominate the skyline and landscape of this part of the county.
- b) Removing the important visual separation between Boxworth and Conington in particular, by inserting a significant development into the gap between the two villages. This spatial separation is fundamental to the character of this historic landscape. The result will be to visually merge the settlements which will be particularly unfortunate given their relative prominence in the landscape.”

In a review of the Planning Appraisal he considers that the proposal has:

- a. Disregarded the horizontality of the landscape character
- b. Failed to present any evidence to demonstrate how wildlife species and habitat are to be protected or enhanced.
- c. Not achieved an adequate historic landscape assessment

He considers:

“The scale of the proposed wind farm will, in my opinion fundamentally alter the character of this historic landscape pattern by introducing an intrusive, alien industrial

form which will visually connect settlements, resulting in the apparent (and actual) spread of development across the landscape.

The landscape is evidently large and has its own distinctive character which is often considered to create dramatic panoramas, as outlined above. I would suggest that the sculptural (i.e. artistic interest) of the turbines is somewhat negated by their standardised form (which is not unique or innovative as they are replicated across the country) and their sheer numbers, which emphasises their mass production and functionality. The spread of the turbines across the arable fields will also tend to dominate, rather than contributing to its enhancement by adding interest to the character of the landscape.”

In conclusion he states:

“I would agree with the Applicants in their assertion (Para: 6.15 – Planning Appraisal) that, *“the proposal will have adverse effects on the landscape and visual amenity of the area”*. Where we differ is that, in my opinion, the development will have a significant and fundamentally detrimental impact on the character of the area and that any mitigating benefits of the proposal have not been convincingly demonstrated.

I would suggest that while a single turbine might be considered to be a curiosity or feature *within* a wider panorama, multiple structures would *redefine* the agricultural character of the area so that it becomes visually the subservient landscape setting for the wind farm. This would clearly conflict with the intention of environmental policies of both the structure plan and the local development plan.

Finally, I would accept that it is important to develop renewable energy sources to help reduce reliance on fossil fuels etc. However, in achieving this objective the claimed benefits of such ‘sustainable development’ should not be at the expense of other important environmental factors, including the very identity of the landscape on which it is imposed.

I would therefore suggest that this proposal is refused due to its negative impact on this historic agricultural landscape, contrary to the provisions of both the structure plan and the local plan.”

46. **Cambridge City Airport** objects. It states:

“As recorded in the ES, both the MoD and Cambridge City Airport have registered an objection to the wind farm and the reasons for doing so have been stated. Comment and counter arguments to the objection have been based largely on the Cyrrus Report and, in general, they imply that most (if not all) of the problems can be solved by software changes to the radar (which, at the time of writing are not available) and/or by procedural changes (which may or may not be possible) for the control of aircraft in the Cambridge area. Cambridge Airport procedures are designed centrally, and they are influenced by and must take account of the requirements of surrounding airspace users.

Section 3 of the Cyrrus Report explains realistically the situation at Cambridge and it goes on (at paragraphs 5.1.6 to 5.2.3) to explain the problems that will affect the radar and our ability to offer a radar service if the wind farm development were to go ahead. However, it dismisses any problems with operational issues and at a stroke concludes that, whilst there is a *potential* impact on the ability of Cambridge Airport to offer a *full* radar service in the vicinity of the development *under certain wind*

conditions, there are no significant problems. This is a somewhat superficial appraisal of the situation, particularly with regard to flight safety. A radar service that is limited because of restrictions imposed by the presence of a wind farm introduces an added risk to aircraft in the area and an added workload on the radar controller by forcing him to consider yet another variation to standard procedures.

If we could ring-fence the airport and ignore everything that happens outside our direct area of control, this particular wind farm may be less of a problem. However, the world of air traffic services does not consist of confined isolated areas of control and assistance. If it did, flight safety would be seriously jeopardized. Flight safety and our responsibility to create and maintain a safe air environment does not cease just because aircraft are not in the immediate vicinity of Cambridge City Airport or not under our direct control.

In general, pilots currently seek assistance from Cambridge ATC out to a range of approximately 30nm. Assistance frequently involves requests for some form of radar information or advisory service which helps the pilot to maintain separation from other aircraft in the vicinity, particularly when the weather is poor. There is little doubt that a wind farm at Boxworth would degrade such a service in that area.

Whilst not directly relevant to this application, I believe we should also consider the likelihood of wind farm 'creep' if this development were to be approved and used as a precedent. I currently have tentative enquiries for 30+ developments consisting of over 300 turbines within the CAA and MoD areas of interest around Cambridge. Probably many of these will not materialize; however, if they were to proceed and planning approval given, then we would be faced with a very serious flight safety problem."

47. **Civil Aviation Authority (CAA)** comments:

"The proposed wind farm would lie in relatively close proximity to several local aerodromes, the operations at which might be affected by such a development. Accordingly, I recommend that the viewpoints of the aerodrome operators at Cambridge Airport and Bourn Aerodrome are sought. Additionally, the input of National Air Traffic Services Limited should also be taken into account."

48. No comments have been received from the **Operators of the Airfields at Little Gransden, Fowlmere, Bourn or Fullers Hill.**

49. **Imperial War Museum, Duxford** has no comments on the proposal, which will not interfere with its operations in any way.

50. **National Air Traffic Services** comments that the proposal does not conflict with its safeguarding criteria. It therefore has no safeguarding objections.

51. **Defence Estates (DE)** objects:

"This site lies within coverage of the Airfield Radar at Cambridge Airport. The rotating blades on turbines have the potential to produce false radar returns, which could compromise flight safety requirements. At this juncture the Ministry of Defence wish to raise a formal objection to the development of this wind farm as we are not presently convinced that any potential mitigation offered by the developer would address our flight safety and radar performance concerns."

In addition DE states that the wind farm will have no impact upon military activities at Wyton.

52. **Orange PCS Ltd** has identified an existing microwave link that appears to transect the site. This could be severed although it should be possible to avoid this by careful siting of the structures.
53. **NTL** acting on behalf of OFCOM, which has a watching brief to protect television services, comments in general (summarised) that:

“Experience has shown that it is unlikely significant interference will be caused beyond about 5 to 10km behind the turbines or beyond 0.5km elsewhere around the wind farm.”

On this particular site it states:

“It is predicted that no ntl RBL (Rebroadcast Link) or SHF (Super High Frequency) links should be affected by the proposed wind farm.

With regard to domestic reception, people in this area are expected to be receiving their TV signals from Sandy Heath main transmitter (TL204494) to the south west of the wind farms. Homes to the north east of the wind farm site may experience interference problems due to the development. The area most at risk would be Swavesey and maybe Fen Drayton. It is unlikely reception problems will extend as far as Over although problems cannot be ruled out entirely.

Homes close to the development, where high level of reflected signals could be received, may experience reception problems irrespective of the direction. Fortunately, there appears to be very few dwellings nearby therefore large-scale problems are not expected. However, some isolated problems near to the site can't be ruled out entirely.

If viewers were affected by the development, the broadcasters/viewers would look to the developer to rectify any problems caused.

Ofcom are responsible for protecting television reception in this area of the country and ntl comments on behalf of them. Because of the small risk of potential problems, ntl is obliged to enjoin the Council to enter into an agreement with the developer (for instance under Section 106 of the Town and Country Planning Act 1990 or a similarly binding agreement) to meet the cost of investigating and rectifying any problem that may occur.”

54. **Head of Strategic Planning, Cambridgeshire County Council** has “significant concerns”. These are expressed as follows:

“In principle the County Council as strategic planning authority considers that proposals for renewable energy generation should be favourably considered as set out in Structure Plan Policy P7/7 and its supporting text (paras 7.18 to 7.20). However, as the Policy makes clear any proposals must not cause unacceptable impact on residential amenity or to the local environment.

Our significant concerns about this proposal can be summarised as follows:

- a. Lack of study in South Cambridgeshire defining areas of search for wind energy developments;

- b. Potential impact of scheme on the landscape and rights of way, subject to more detailed assessments of visual intrusion and planting schemes;
- c. Potential impact on local fauna, particularly the golden plover;
- d. Participatory planning with the local community;
- e. Safety on the A14 and any implications in relation to the anticipated offline upgrading.

The Structure Plan supporting text to Policy P7/7 suggests that Local Planning Authorities should define areas of search for generating energy from wind. An exercise of this nature has not yet been undertaken within South Cambridgeshire District, although I recognise that the District Council has contributed at officer level to a number of studies aimed at identifying the potential for renewable energy.

Detailed comments on the environmental impacts of the proposals are attached. We have a concern regarding potential loss of feeding habitat for golden plovers and further investigation is needed as to how the site should be managed in order to determine how best the site should be managed in order not to adversely affect this protected species.

From the point of view of Rights of Way, comments made in earlier consultation appear to have been taken into consideration although we have concerns regarding the provision of a continuous 200m buffer zone alongside the bridleway running from Boxworth to Conington and would wish to be assured that this will be provided.

In order to provide some mitigation for the visual impact from nearby existing rights of way we would request a contribution of £20,000 towards compensatory improvements to the rights of way network in the vicinity, in the event that the proposal is approved and implemented.

We are aware that there is considerable concern about the wind farm proposal particularly in the nearby village of Boxworth. It is important that the local community has been given adequate opportunity not only to comment on the proposals but also to shape them if they are given the go ahead.

I note that the material provided by the applicant suggests that drivers on nearby roads are not distracted by wind turbines situated in close proximity to the roads. However, I am concerned at the potential impact on safety on the nearby A14. This road is very heavily used and has a poor safety record. The County Council could not support any development where there was any likelihood that it could add to the dangers on this heavily congested route (detailed comments on highway issues are attached). Has there been any investigation of how to mitigate the visual impact of the turbines on drivers through offsite planting close to the A14?"

The detailed environmental comments relate to possible (though difficult) landscape mitigation, golden plover protection and rights of way (buffer zones, operator's responsibility not to endanger users by displacement of ice, information board and legal responsibilities.)

Detailed highway comments (advance warning signs on the A14, provision of a viewing area/lay-by on a country road (not the A14), avoidance of 'ice-throw', need for consultation with the Police and early consultation required in relation to abnormally large vehicles and which roads they might use during construction) are also made.

55. **T-Mobile** has no existing or planned sites in respect of the above proposal.

56. **BBC**, which is jointly responsible with Ofcom for domestic reception of terrestrial television services, comments:

“Where a new development causes reception problems, we look to the developer to rectify these, and planning authorities sometimes require a legally binding commitment under Section 106 of the Town and Country Planning Act 1990, in order to enforce this at the outset.

In the event of reception problems, there may be straightforward potential solutions such as improving the receiving aerials or providing the affected households with an alternative source of suitable television signals - off air from a different transmitter, from an existing cable system, or in certain circumstances from a satellite. An appropriate alternative source of television might be either analogue or digital. Given the various issues surrounding the identification and use of any alternative source, particularly the differences between the adoption of an analogue or a digital approach, the developer may require the services of a competent domestic television dealer to investigate, advise on, and implement the most appropriate solution.

If there are no available alternative sources of television, it might be necessary to investigate the provision of some sort of bespoke distribution system for the affected households - such as a local cable system fed from a point where satisfactory reception can be achieved.

Analogue television has already been rolled out to 99.4% of the UK population, and the broadcasters’ programme for building new relay transmitters concluded several years ago. For digital television we are still in the process of exploring ways of extending the primary coverage of the service. It is no longer appropriate for broadcasters to consider building a new relay station specifically to overcome problems created by a wind farm development, however the possibility that one of the above approaches offers a practical way forward has been enhanced by the various sources of digital television now present in most areas.

Moving on to your specific case, the proposed wind farm on land in the parishes of **Boxworth** and **Conington (TL36)** is located within an area assigned to the Ofcom, and they should reply to you with the results of their assessment. The BBC reserves the right to comment in future should the Ofcom or NTL, not wish to do so.

The wind farm development is not expected to have a detrimental effect upon national or local BBC Radio reception.”

57. **British Horse Society** has no objections, noting that the proposal complies with the BHS guidelines for a safety margin of 200m.
58. **Countryside Agency** does not wish to comment upon the application, given that the proposal does not:
- a. Set a national precedent where national guidance is lacking;
 - b. Have a major impact on an important Countryside Agency initiative; or
 - c. Have a fundamental effect on the intrinsic character of a National Park, AONB or Heritage Coast.
59. **SCDC Landscape Design Officer** objects:

“The landscape into which these turbines is proposed is massive and open with clear views from Bluntisham. The massing of the masts will have a significant visual impact for several kilometres and a character impact locally. Is there a reason for the site to be so much larger than area for masts - is it envisaged they will want more? Note: the photos within the ES are in some instances misleading - in others, they have not been taken from best view points. If approved will land on site be available for mitigation planting at strategic points? Planting on site, whilst perhaps beneficial for local wildlife, would do little for either character or visual impact.”

60. **East of England Development Agency (EEDA)**

“Broadly supports the proposals as it helps to deliver a number of the key themes identified in the Regional Economic Strategy (RES). EEDA recognises the application to be one of strategic significance in its potential contribution to the achievement of the region’s target for the production of energy from renewable sources. The proposal may also bring added benefits via economic investment from businesses in the region. We wish to emphasise that the scheme should be considered in relation to the implementation of the improvements of the A14 as part of the Cambridge-Huntingdon Multi-modal scheme, one of the regional economic strategy’s priority infrastructure schemes.”

EEDA explains its role to improve the region’s economic performance, which sets the context for its comments on a planning application. It comments on the regional renewable energy targets:

“This application is a major one in its own right as well as an important potential contributor to the region’s adopted renewable energy target. As a member of the region’s Sustainable Development Round Table, EEDA is committed to assisting in the achievement of the regional target of 14% of its electricity generated from renewable sources by 2010, 10% of which needs to come from on-shore sources. This target is incorporated into the emerging RPG 14 for the region.

Progress towards this is being monitored by Renewables East, an EEDA funded agency established to promote the growth of renewable energy output in the region and capture the economic benefit of sector expansion for the region. The target was broken down in the original regional assessment, “*Setting a challenging target for the East of England*” to identify contributions from several renewables sectors. The target for wind power, as a mature technology, is of particular significance for the region. The contribution from onshore wind needs to reach 460MW of installed capacity by 2010. At present, adding together wind power projects built, those approved but not started, and those currently the subject of other planning applications or appeals, the region could deliver about 198MW (43% of the target). Approval of this scheme would bring this to 230MW (50%). This is both a significant increase in itself, and an important milestone in achieving a more sustainable region.

Considerable effort is being expended towards bringing forward other technologies so that their share of the target, albeit a smaller one, can also be delivered.”

EEDA welcomes commitments to actively consider regional companies in all aspects of the project’s construction.

In conclusion:

“EEDA recognises that there has been considerable public concern about this scheme. Nonetheless, the application and its ES have been prepared systematically

and with considerable thoroughness by experienced and well-respected specialist consultants. Their conclusions indicate that the wind-farm can be accommodated without unacceptable environmental impacts.

EEDA considers that the proposal will make a significant contribution to achieving the region's renewable energy target and may result in considerable economic benefit accruing to businesses in the region. As such taking into account the vision and themes as set out in the RES (2001), the proposals are supported by EEDA."

61. **Environment Agency** recommends the imposition of conditions relating to pollution control (including surface and foul water drainage) and landscaping and habitat mitigation works. Advice is offered in order that the conditions can be satisfactorily discharged.
62. **Huntingdonshire District Council (Landscape Officer)** has four main areas of concern:
1. "The ES is poorly structured and thought out, making it difficult to give proper consideration to its arguments and conclusion.
 2. Judgements on landscape character and impact assessment seem overly subjective, as they fail to rigorously employ the most recent best practice and guidance on the concept of landscape capacity.
 3. Although the ES admits that significant landscape impacts (and moderate to substantial visual impacts) would occur, no mitigation is proposed or deemed necessary. We are not convinced that possible mitigation measures have been fully explored, especially as so little evidence and argument is put forward to back up this position. This is of particular concern to this authority, in view of the wide geographical area potentially affected.
 4. The issue of "shadow flicker" affecting drivers does not seem to have been properly considered. Due to its siting immediately south of the A14, there may be possible effects for east and west bound drivers at different times of day, and these require more detailed scrutiny."
63. **Cambridge City Council** has considered the proposal against PPS22, Structure Plan Policy P7/7 and City Local Plan Policies. Comments are:

"The potential significant impacts on Cambridge City arising from this proposal are in the areas of landscape and visual impact, the radar at Cambridge Airport, local and regional employment, and CO₂ and other emission savings.

Landscape and Visual Impact

The greatest impact would be in the immediate vicinity of the proposed site. I believe the impact on Cambridge City would be negligible.

Cambridge Airport Radar

I understand that Cambridge Airport and the Ministry of Defence are considering a separate report on this technical issue, and in my view it is possible that it could be mitigated.

Employment

I consider that there are likely to be benefits to the city, particularly during the construction period.

Emissions

I consider that there would be general benefits in the reduction of CO₂ and other emissions, in which the city would share.

In general policy terms, I feel the application should be supported and do not have any objections. I must stress, however, that this is purely an informal officer opinion. There has been no informal or formal consultation with, or decisions by, members of this authority on the application”.

64. **SCDC Strategic Development Officer** sets the context in terms of achieving a national shift to a sustainable energy path.

- i) The Government's first step towards reducing the UK's emissions and producing more renewable energy is represented by its goal to generate 10% of the UK's electricity from renewable energy sources by 2010 and to aspire to a doubling of that target to 20% by 2020.

At the regional level, the forthcoming RPG 14 is intended to help the eastern region progress towards energy self-sufficiency. It is also designed to ensure the region meets its 14% renewable target for electricity generation (*Note: currently only 0.45% of the region's energy demand is renewably sourced*). In terms of moving towards the 14% target, the region's 2010 **onshore** target for renewable energy has been increased to 10%. This represents the first step towards an eventual onshore target of 17% for the eastern region by 2020. In pursuit of this target, RPG 14 will require Local Development Documents to contain policies that will presume in favour of, and emphasise the wider sustainable development benefits associated with energy efficiency and renewable energy.

With regard to the region's 14% target, the aggregate target for Cambridgeshire is 9% which equates to 290 GWh being produced by onshore wind in Cambridgeshire. This target, identified in a report undertaken on behalf of the East of England Sustainable Development Round Table, recommends local planning authorities should:

“..... continue to be involved in the renewable energy debate... [and that their Local Plans] .. more proactively reflect the potential for renewable energy production...”

This target has been established at a time when South Cambridgeshire is set to experience unprecedented growth in housing and new development with 20,000 new homes planned for construction by 2016. The District's population will also increase by 26,000 and result in a greater demand for energy. Although the District does not currently contribute towards Cambridgeshire's 9% renewables target, there exists considerable scope for producing renewable energy including wind across the District. Such opportunities were identified in the recent study undertaken on behalf of the Cambridge Sub-Region partners. The Cabinet endorsed report, assesses the potential for various forms of renewable energy generation including wind across the Cambridge Sub-Region which mostly comprises South Cambridgeshire.

The proposed wind development at Conington presents South Cambridgeshire with an important opportunity to play its part in achieving the

County's 9% renewables target. It would do this by generating clean, zero emission electricity that will supply 37% of the District's total demand for domestic electricity.

It is also important to note that there is evidence indicating widespread public support for onshore wind developments. Recent surveys include those conducted on behalf of the RSPB and Scottish Power, and most recently, a national ICM poll that indicated 69% of those polled either support or strongly support the development of a wind farm in their area with only 16% either opposing or strongly opposing their local siting. (*Note: the results for the same question broken down for Eastern England revealed 75% in favour and 9% opposed.*)

He concludes:

"It is important to recognise that relatively small measures do make a difference and the development should be considered in terms of its contribution towards changing the UK's energy mix in favour of low carbon energy generation. Moreover, the UK's energy demand continues to increase and wind energy will need to play its part alongside other forms of renewables as well as nuclear and coal and gas-fired power stations.

It is suggested that members consider the application in terms of the Council's corporate commitment towards sustainable development and its ongoing efforts to address climate change. As a signatory to the Nottingham Declaration for Climate Change, the Council is committed to reducing the district's CO₂ and GHG emissions. The Council is seeking to do this by developing a climate change strategy as part of its Community Strategy and preparing a climate change action plan as part of its involvement in the European Climate Menu programme. Consequently, the Council needs to 'act locally' and support a planning proposal that will help reduce CO₂ and greenhouse gas emissions across the District.

Such action would help provide a more sustainable future for the residents of South Cambridgeshire and help promote the quality of village life."

65. **English Heritage** does not wish to make any representations.

66. **County Council's Principal Archaeologist** confirms that:

"The archaeological evaluation was undertaken in consultation with this office and that significant archaeological remains were identified in the vicinity of the proposed location of Turbine 7. Further investigation would be appropriate in this area in accordance with the mitigation proposal outlined in the ES Section 7.11.

We would recommend that this work is commissioned and undertaken at the expense of the developer. This programme of work can be secured through the inclusion of a negative condition (PPG16, para. 30) in any planning consent."

67. **SCDC Chief Environmental Health Officer** has appointed a Consultant to review the acoustic information provided in the application. Further information or clarification has been sought on the following matters:

1. "The manufacturer's data provides power levels with a tolerance of plus or minus 2dB(A). I believe you have used the stated figure for your calculations,

which means that the overall level could be 2dB(A) higher even if the manufacturer's data is correct and without any other propagation inaccuracies. I would appreciate clarification regarding this.

2. I am concerned that the background noise measurements were taken over a relatively short period of time during January, and feel that this is unlikely to represent conditions at other times of the year such as during the summer. Although no two sites are the same, we have been taking measurements approximately 30 miles west of this site for approximately six months and are finding a considerable variation between the measurements during autumn and winter compared with the late summer.
3. It may be that quieter conditions will only pertain when there is insufficient wind for the turbines to be operational. However, I am unclear from the information provided as to how wide a range of wind conditions have been covered and what the relationship is between wind speed, direction and ambient noise level. I would, therefore, appreciate further information regarding this if it is available, although it appears that, as with the relatively limited measurement period, the data available may not cover a sufficiently wide range of conditions.
4. Although the measurement positions were agreed with the Local Authority, objectors have subsequently shown that other locations in the vicinity of some measurement positions appear to benefit from lower levels of background noise but are likely to be exposed to similar levels of noise from the wind farm. I am therefore concerned that the differential you have shown between background noise and wind farm noise maybe eroded by several db at alternative locations. I would therefore appreciate any further information you can provide regarding this."

68. **The University of Cambridge (Cavendish Laboratory)** has no objections in respect of impact upon the operation of the Radio Telescope at Lords Bridge.

Representations

69. An extensive public consultation exercise was undertaken, including all residents living in the Parishes of Boxworth and Conington, residents of Middleton Way and Mill Road, Fen Drayton and businesses in the vicinity of the Swavesey A14 junction.
70. In addition the application was advertised in the Cambridge Evening News as an application accompanied by an ES. Several site notices were posted in the villages of Knapwell, Lolworth, Swavesey, Elsworth, Boxworth, Conington and Fen Drayton.
71. Stop the Cambridge Wind Farm (StopCWF) is an Action Group formed specifically to oppose the application. It has prepared a consultation response consisting of four volumes of documentation and a 1:200 scale model. Volume 1, the Objection Summary, is attached in full. Volume 2 is the objection statement; Volume 3 is a commentary on the methods and processes in the production of the ES; Volume 4 is a critique and analysis of the ES and its contents; and Volume 5 is a response to the applicant's Addendum (see Paragraph 80 below).
72. In summary StopCWF objects to the proposal for the following reasons (see Section 17 of Volume 1):
 1. "Increased safety risk on the A14

2. Visual intrusion for local residents
3. Industrialisation of a rural landscape
4. Adverse impact on radar safety at Cambridge Airport
5. Potential noise and health impact on local residents
6. Conflict with national, regional and local planning policies
7. Adverse impact on bird, bat and other wildlife
8. T.V reception degradation

A number of these issues (e.g. A14, aviation, noise, visual intrusion) would be sufficient on their own to warrant rejection, consequently the cumulative effect is overwhelming. Furthermore:

- The Environmental Assessment produced by the Applicant is flawed, inaccurate and lacks the required rigour and objectivity.
- The Applicant has undertaken no meaningful consultation with local people or the local parishes.
- Public opinion is implacably opposed to this development.”

73. In addition StopCWF is concerned that loss of amenity will have an adverse impact on property values and that no objective appraisal has been carried out in respect of congestion at the site access on a minor rural road, caused by slow turning movements every 4 minutes during the construction period.

74. StopCWP (Volume 5 of Response) indicates that the applicant’s ES Addendum does not alter its previous objections. Specifically it considers that:

- a) The responses relating to landscaping and visual effect are unconvincing;
- b) The applicant has failed to demonstrate that local residents will not be adversely affected by noise;
- c) The Addendum does not address air safety; and
- d) The substandard design and uniquely dangerous nature of the A14 road are not given due consideration.

75. Andrew Lansley M.P. objects. He states:

“I have been contacted by a substantial number of constituents with their concerns regarding the proposal for a wind farm in this location. I have also met the applicants to discuss their proposals, and I have attended a meeting with Boxworth, Conington, Fen Drayton and Swavesey Parish Councils to discuss their views.

I wish to object to the proposed development. My view is that this is an inappropriate location for such a development; it would severely impact on the landscape and environment of neighbouring villages, and is not justified by wider energy policy needs. There is a lack of longer-term data on wind speeds on which to base informed judgements about the reliability and efficiency of inshore wind farms. It is instructive that Lord Sainsbury of Turville, the Government’s Science Minister, told the House of Lords on 3rd February 2004, in relation to the Danish move to offshore wind farms, that “they have done so for the good reason that offshore wind farms can be larger, which is more economical”. The Government’s Renewables Obligation needs to be met through a range of energy sources, including, for example, biomass.

The contribution of wind power will be significant but can be most effectively met through offshore wind farms.

The large scale of the proposal would take a major part of the open countryside at this location and the impact of the turbines on the landscape would be dramatic. The constraints and demands on the open countryside in South Cambridgeshire are exceptional. If open countryside is not required for our development needs, then I believe it is important that it not be developed. The loss of open countryside which this proposal would cause, on a major route within the sub-region, and affecting so many villages, is in my view unacceptable.

In addition, I am concerned at the road safety issues arising from the erection of such a prominent and significant development adjacent to the A14, where traffic pressures are already too high and where any distraction for drivers could see an increase in accident levels. I have not yet seen the Highways Agency's consultation on the A14 reconstruction, but it seems to me that this may be inconsistent with the location of the proposed wind farm.

I have been aware of substantial concerns expressed, at other wind turbine locations, at the effects of noise, especially low-frequency noise, and its effect on residents."

76. County Councillor Mrs Shona Johnstone objects. She states:

"I do not believe that the application conforms with the Cambridgeshire and Peterborough Structure Plan 2003. **Policy 7/4** states that:

- Development must be related sensitively to the local environment and contribute to the sense of place, identity and diversity of the distinct landscape character areas.

The location of the proposed windfarm lies in an area unique in character. It forms the boundary of the rolling countryside that characterises the west of the county and the flat Fens to the north and east. Section 7.14 of the structure plan states:

- Proposals for prominent structures will only be permitted if they are essential in the countryside and if the location, siting and design minimise adverse impact on the environment. Special attention needs to be paid to:
- The need to integrate proposals with the existing landscape features to conserve and enhance local character;
- The scale of the development, its siting, design and the materials and colours used, which must be in sympathy with the surroundings.

I fail to see how this application can meet those criteria. Wind farms can equally and more effectively be sited offshore, rather than in the countryside, no amount of mitigation would enable the turbines to be integrated with the local environment and the design, materials and colours are not in sympathy with the surroundings. There are many listed buildings in the area upon which the proposed application would impact adversely.

- **Policy P7/7** states:

Local Planning Authorities will consider areas of search for generating energy from wind in locations that:

- Attain adequate wind speeds;
 - Do not cause unacceptable impact on residential amenity or to the local environment;
 - Can be efficiently connected to new or existing energy demands.
- Section 7.20 of the Structure plan goes on to say that:

Supplementary Planning Guidance may be needed to define areas most suitable for generating energy from wind, particularly the potential for wind farms. Account should be taken of the local ecology and sensitive landscapes or where radar coverage for aviation may be affected.

I am not aware that Supplementary Planning Guidance has been prepared and this application should not be determined until this has happened. As mentioned above, the location of the proposed wind farm is in a unique part of the county and I believe that its impact on the local environment and amenity (eg footpaths) is unacceptable.

A14

I believe that the location of the development is unacceptably close to the A14. This stretch of the road is the busiest trunk road in the country, with traffic frequently in excess of the capacity of the road. The 2003 Traffic Monitoring Report shows that the 12 hour flow at Swavesey was 58,539 vehicles (an increase of 28% since 1993), of which some 11,571 were HGVs, a figure well above average. It is well known that wind farms are a distraction to drivers and I believe that the risk of causing accidents is unacceptable. The road already has a poor accident rate. Between July 1994 and December 2003 (presumably July-December 2003) there have been 11 fatal accidents, 103 serious accidents and 598 slight accidents on the stretch between Hinchingsbrooke and Girton. The wind farm will be visible for much of this part of the road and I believe this will lead to further accidents.

The A14 is due to be upgraded later this decade, with a new line from Fen Drayton and widening between Fen Drayton and Cambridge. The proposed route may come much closer to the wind farm than the existing road and I do not therefore believe that the application should be determined until the Highways Agency has published its preferred route.

Visual Intrusion

The height of the proposed turbines means that they will be visible from a wide area and I believe that the visual intrusion will be unacceptable. Given the height and nature of the application, it will not be possible to provide planting to mitigate the effects of the turbines.

Health

The effects on health of wind turbines has still to be adequately researched, but there is much anecdotal evidence to suggest that people living near to wind farms have suffered negative impacts on their health. I do not believe that this application should be determined until further studies have been carried out into the health impact of the proposed development.”

77. In addition 512 individual letters of objection have been received. The main points are summarised below, although these are also addressed in the StopCWF documents:

1. The turbines will be of industrial appearance and will dominate and adversely affect the landscape, which should be protected for future generations.

2. Off-shore renewable energy projects are preferred or in areas where efficiency of turbines is maximised.
3. Viability of the scheme is questionable given efficiency levels. Other renewables are more efficient.
4. The scheme is contrary to development plan policies and emerging LDF policies.
5. Moving blades will be a danger to birds, particularly Golden Plover and Barn Owls, and bats.
6. Proximity of the turbines to the A14 will be a visual distraction to drivers exacerbating dangers and increasing the potential for accidents on this road.
7. The turbines will interfere with the effectiveness of radar installation, and hence air safety, at and in the vicinity of Cambridge Airport.
8. Adverse noise and vibration effects will arise.
9. Quality of life and health particularly flicker, emissions, stress and sleep patterns for villagers will be seriously affected by reason of proximity of turbines to housing.
10. Increased run-off from concrete foundations would increase the risk of flooding in the River Great Ouse drainage system.
11. No local benefits.
12. Priority should be reduced consumption of fossil fuels.
13. Ice thrown off the blades would be a considerable risk to passing traffic, pedestrians and buildings.
14. Construction will cause traffic congestion and have a major effect on local hedgerows, flora and fauna.
15. Turbines may well affect programme reception.
16. Precedent both for the extension of the proposed development and for additional, similar developments in the surrounding area.
17. Damage and permanent loss of archaeological matter.
18. Amenity of the Boxworth-Conington bridleway will be seriously compromised.
19. The occupier of New Barns Farm Cottage, Conington does not wish to be evicted.
20. The setting of Listed Buildings in surrounding villages will be damaged.

78. The source of these letters are as follows:

Conington 92, Boxworth 89, Fen Drayton 67, Swavesey 57, Elsworth 48, Fenstanton 24, Lolworth 21, Knapwell and Papworth Everard 15 each, Hilton 14, Dry Drayton and Bar Hill 13 each, Over 12, Oakington 4, Kingston and Longstanton 2 each and Others 23.

79. 726 letters of support have been received. 21 of these were written by residents, including from Oakington 1, Conington 2, Elsworth 2, Fenstanton 2, Hilton 1 and Over 2. The remainder (705), including 3 from non-existent addresses in Cambridge and Boxworth comprise signed pre-prepaid 6 standard letters. The arguments in support are summarised:

1. Wind energy is the only viable renewable resource capable of tackling global warming and reducing the reliance on fossil fuel burning power stations.
2. Turbines near major roads do not increase accidents.
3. Independent opinion polls show the majority of people do not oppose wind farms.
4. Wind Farms are graceful and aesthetically pleasing structures. They will be a point of interest in a relatively bland landscape.
5. Local communities should have their own localised forms of generation.

6. It is understood that English Nature and RSPB have not objected to this site. In general these bodies support well sited wind farms.
 7. Construction impact is minimal.
 8. Given the proximity to the A14, the proposal will not be a noise nuisance to local villages. The A14 is already a major industrialised structures.
80. These arguments are supported by Cambridge Green Party Chairperson, who considers that this application appears to fulfil all its criteria for approval. It will continue to press for reduction in energy use as a key strategy in reducing climate change.

Applicant's Response

81. The applicant has responded to various issues and concerns raised by consultees. This response is included in an Addendum to the application and ES (February 2005). It has been structured to address the main points of the following consultees:
- IEMA (Institute of Environmental Management and Assessment) review (see paragraph 84(a) below)
 - CBA (Chris Blandford Associates) landscape and visual assessment (see paragraph 84(c) below)
 - SCDC Noise Consultant's response (see paragraph 67 above)
 - Highways Issues (see summary in paragraphs 82(i) below)
 - Ecology in response to comments from English Nature, RSPB and Cambridgeshire Bat Group
 - Additional responses to material noise points raised by StopCWF and results of further Golden Plover Surveys.
82. Appendices to the Addendum include:
- Great Crested Newt Mitigation Plan (April 2004)
 - Golden Plover Study (March 2005)
83. On 18th March 2005 the applicant's submitted a "position paper" for the Wind Farm and Cambridge Airport. Its conclusions are incorporated at paragraph 84(g) below.

Planning Comments

84. Having regard to the provisions of the development plan, the nature of the proposed development and representations received the main issues are considered to be as follows:
- a. The adequacy of the Environmental Statement and site selection
 - b. The contribution to renewable energy targets and need
 - c. Impact on landscape character and visual appearance
 - d. Impact on the historic landscape
 - e. Noise
 - f. Impact on wildlife and ecology
 - g. Efficient operation of radar installations and aircraft safety
 - h. Health effects
 - i. Access and highway safety
 - j. Impact on T.V. reception
 - k. Impact on safety through Icing
 - l. Shadow Flicker

(a) The adequacy of the Environmental Statement and Site Selection

85. The Environmental Statement has been evaluated on behalf of the Council by IEMA (Institute of Environmental Management and Assessment). The main conclusions of IEMA are summarised below:

- (i) It would have been useful if the ES had described the level of contribution the development will contribute to the regional targets e.g. as a percentage.
- (ii) It would have been useful if the ES had also provided the additional area of land use that is required for the construction period which 'will be returned to its former use' (page 26, section 3.4.2.2) once operational.
- (iii) It would have been useful if the ES had identified how many staff will be required on site during the construction phase and their transportation requirements. This would have helped to identify whether there will be any potential impacts to the local road network, access to the site and parking.
- (iv) The ES should have provided a brief summary of the location of the proposals in relation to nearby settlements, e.g. the distance from Boxworth, Cambridge.
- (v) It would have been useful if the ES had provided information on how long the actual wind monitoring has occurred, at what height the measurements have been taken and to have specified the average wind speed that has been measured. This would have justified the claim that wind speeds are exceeding the database predictions.
- (vi) The closest residences have been identified as part of the noise assessment and their locations are shown in Appendix 5. It would have been beneficial if the ES had clearly stated the proximity of each residence to the nearest turbine. It appears, by comparing the illustration in Appendix 5 and Figure 1 (the site location), that not all of the nearest properties are located in the application area. It would have been useful if the ES had been clear as to who owns the nearest residences. This is important as it may have a bearing upon the perceived acceptability of the proposal and its associated impacts.
- (vii) The ES does not provide any information on whether any issues have been scoped out of the assessment. Section 3.2.3 discusses the electricity connection to either a substation at Oakington or St Ives. The ES states that "The connection to the grid is subject to a separate planning application' (*sic*, page 18) and has not been further discussed. Given that the proposal is reliant upon a grid connection, the potential environmental impacts associated with the grid connection should have been outlined. It would have also been useful if the ES had stated whether the issue of noise impacts from the construction phase of the proposals had been considered.
- (viii) The ES mentions that a public exhibition was held on Wednesday 19th May. It would have been helpful if the ES had provided information on the number of local representatives and the locality of residents that were invited, and the number of people who attended the exhibition.
- (ix) Chapter 2 discusses the site selection and project evolution. With the inclusion of the application site, three sites were considered for the proposed

development. The ES clearly describes the reasons for discounting two of the sites (page 11). It would have been useful if the ES had provided the positive aspects of each site (including the application site) as well as the negative ones. This would have helped the reader to fully understand the reasons for choosing the preferred option.

- (x) It would have been useful if the ES has provided a brief summary of the baseline noise survey results.
- (xi) In the landscape assessment, it would have been useful for further information on the methodology that has been used to determine the landscape sensitivity (see issue specific comments).
- (xii) It would have been helpful if the magnitude of change for the noise environment could have been clearly stated within the main ES.
- (xiii) The ES should have provided a stronger commitment to the mitigation measures and monitoring that have been described. More information could have been provided on the monitoring that is envisaged for golden plover, arable flora and great crested newts. Mitigation measures for great crested newts (Appendix 6) was not provided in the ES.
- (xiv) It is suggested that an environmental audit of the site could be conducted on a periodic basis, especially after the construction phase, where the majority of impacts will have occurred. This can be used to check the accuracy of impact predictions made within the ES, e.g. noise, landscape and visual and ecological impacts and results used by the developer in further improving the development of wind turbines and predicting environmental impacts.
- (xv) It would have been useful if the ES had stated the impact during the worst case when HGV vehicles movements will be at their greatest during construction and the period of time in which the maximum number of vehicles is expected.
- (xvi) A 20 km study area for the landscape and visual assessment has been identified as being 'sufficient for the purposes of these 100m high to tip turbines'. The ES acknowledges that this differs from the guidelines of a 25km study area. It would have been helpful if a reasoned justification for the reduction in the study area had been provided within the ES, especially as the ZVI map indicates that a considerable amount of turbines can be seen at the 20km boundary.
- (xvii) The methodology in determining landscape sensitivity could have been described more clearly.
- (xviii) There is an apparent contradiction on what is classified as a 'near view', for which clarification would be welcome.
- (xix) In order to demonstrate a worst case impact assessment, the effects of summer vegetation screening should not have been included in the assessment on the landscape of Madingley Hall.
- (xx) It should be noted that the assessment does not illustrate the potential cumulative landscape and visual impacts from other wind turbine developments. The ES should have provided a justification for this omission.

- (xxi) It would have been useful if the ES had summarised the potential cumulative landscape and visual impacts of the proposed development with proposed A14 transport developments and major housing and new village developments.
- (xxii) It would have been helpful if the magnitude of change of noise impact could have been clearly stated within the main ES. This would have been beneficial as it would give an indication of the change in noise levels that the receptors will experience and would identify a significant change in the noise environment that could still be below the thresholds set out in the guidance. In addition, the ES should have provided a brief summary of the baseline noise level.
- (xxiii) The ES should have defined terms which predict level of magnitude of impact upon ecology.
- (xxiv) The assessment of the nocturnal use of the site by golden plover should have either been undertaken and results included within this ES, or a reasoned justification provided for its omission.
- (xxv) A badger survey has been undertaken. The study area is identified as being 'an area covering at least a 50 metre radius of the proposed site for each of the ten wind turbines'. As the current proposal is for 16 wind turbines, it is not clear if the survey area is appropriate for the proposed development.
- (xxvi) The ES provides information that an independent aviation study was submitted to Cambridge Airport and has been provided in Appendix 7. The report was produced before the alteration of 15 wind turbines to 16. It would have been useful if the ES had stated whether there are to be any implications to the outcome of the report and therefore any potential significant impacts from the increase in the number of wind turbines.
- (xxvii) In certain regards the objectivity of the ES is question. For example:

The ES concludes that 'adverse and significant effects that have been identified in this landscape and visual impact assessment are judged to be both localised and acceptable'. It should be noted that the purpose of the ES is to provide decision makers with sufficient information regarding the predicted environmental impacts associated with the project and for them to determine the acceptability (or not) of the proposals. The above statement could be viewed as pre-empting this judgement.

(b) *The contribution to renewable energy targets and need*

- 86. Government policy supports raising the proportion of electricity generated by renewable energy development to 10% by 2010. At the regional level, the emerging RPG14 aims to achieve 14% renewable target (including off-shore wind) for electricity generation with the aggregate target for Cambridgeshire of 9%. The proposed development would have the capacity to generate up to 32MW, which would make a measurable contribution towards these targets. The Council's Strategic Development Officer estimates that it will supply 37% of District's total demand for domestic electricity. The recently published PPS22 also states that targets should be expressed as the minimum amount of installed capacity for renewable energy and should be set for achievement by 2010 and 2020. The potential to generate substantial amounts of renewable energy from off-shore

projects, should not be used as a justification to set lower targets for on-shore projects. The PPS indicates that applications should not be rejected simply because the level of output is small.

The contribution the scheme would make towards meeting regional targets for renewable energy production is therefore a material consideration, which should be weighed in the balance. The benefit associated with renewable electricity production has to be assessed on the basis of its overall efficiency which is significantly lower than more conventional forms of electricity production.

(c) *Impact on landscape character and visual appearance*

87. The Council commissioned Chris Blandford Associates (CBA), landscape architects specialising in wind farm development, to provide an assessment of the landscape and visual effects. In addition the consultants have provided an assessment of the likely impact on the historic landscape.

CBA has reviewed the methodology adopted in the ES to assess landscape and visual impact. Several criticisms are highlighted, for example:

- (i) No explanation of why some sites have been rejected on landscape and visual grounds.
 - (ii) No explanation of whether a smaller scale scheme could be viable and more satisfactorily accommodated within the landscape.
 - (iii) Number of omissions in the methodology used for landscape and visual assessment.
 - (iv) Study area of 20km is too small.
 - (v) Variations within the Claylands landscape character type have not been sufficiently analysed.
 - (vi) No assessment is made of impact on the historic landscape character or fabric of the area.
 - (vii) Inadequate discussion of the setting and character of Conservation Areas, Listed Buildings and Registered Parks and Gardens - indeed, there are inconsistent descriptions of Listed Buildings within the ES.
 - (viii) The twelve photomontage viewpoints do not fully represent the viewpoints defined in the Scoping Report
 - (ix) Visualisations underestimate the true visual impact from certain viewpoints.
- (x) Impact on landscape character is likely to be more significant than stated in the ES due to visual scale (height/size, distance between turbines and the fact that they will be new elements in the landscape).

The conclusions of CBA are as follows:

- (i) "In relation to the conclusions of the landscape and visual assessment, it is agreed that there will be long-term change to landscape character within the study area. The ES states that the

change to landscape character will be slight to moderate. Review of the quality, value and sensitivity of the described landscape character types, suggests, however that the overall effect will be moderate to substantial. It is considered that the turbines will form a new element of the landscape (i.e. resulting in a fundamental change to character and views), and that the visual scale of the proposal has been underestimated.

- (ii) It is arguable that the effects identified in the landscape and visual assessments are 'localised' and 'acceptable'. However, due to the scale of the proposed development, effects on visual amenity are likely to be widespread (in some instances up to 10km and slightly further) from the site. Whilst the effects on landscape character are considered to be significant at distances of up to 3.0 to 5.0 km from the site.
- (iii) On the basis of the review of the ES, our initial preliminary landscape and visual appraisal there will undoubtedly be impacts on the landscape. In this particular case, however, it is considered that the impacts will be greater than suggested by the ES particularly as the quality/value of the landscape has been underestimated and therefore the effects of the scheme have been underestimated. The scheme will result in significant negative impact on the existing open and gently undulating rural character of the area and on the perception of the scale in the landscape.
- (iv) It is acknowledged that the level of acceptability of the wind turbines can be based on a number of aspects such as:
 - a) That, as a landscape feature, their acceptability is subjective;
 - b) That their impact on the landscape cannot be fully mitigated;
 - c) That the landscape effects will have to be weighed against other planning/energy benefits of renewable energy as a 'proven national interest' and;
 - d) That the majority of the visual effects could be reversed in a 25 year (relatively short-timescale) period.
- (v) However, in this instance it is considered that the introduction of a cluster of 16 No. x 100 metre high wind turbines would be unacceptable and have an adverse impact given the open rural character of the area, the sites proximity to the A14(T) and extensive opportunities to obtain views of the proposals from roads, public rights of way and tourist routes and notable visitor attractions within the vicinity of the Site. For these reasons, the proposal could be refused on landscape grounds."
- (vi) These conclusions concur with the opinions of the Conservation Manager and Landscape Design Officer. The former considers that the scale of the Wind Farm would dominate the skyline and landscape and would remove the important visual separation between Boxworth and Conington.
- (vii) In terms of that separation, the approximate distance between Conington (Grange Farm) and Boxworth (Church) along the alignment of the public bridleway is some 3km. Along the spur of higher ground

between these villages the three rows of turbines would extend for a distance of some 2km, which in my opinion, represents a significant erosion of the rural and open gap between these villages.

- (viii) I conclude, having regard to the advice received from CBA, the Conservation Manager and Landscape Design Officer, that the introduction of 100m high wind turbines would have a detrimental and adverse impact upon the landscape. It is considered that the size and scale of the development is incapable of being satisfactorily assimilated and fails to respect the particular local landscape characteristics. The wind turbines would lead to the introduction of alien, man-made and large scale vertical features, which would fail to respect the landform and extensive views of the site, particularly from the surrounding ring of villages and the intervening countryside.

- (ix) As a consequence the scheme would fail to comply with Structure Plan Policies P7/4 and P7/7 and Local Plan Policies EN1 and EN44.

d) Impact on the historic landscape

88. CBA does not consider that the impact on the historic landscape has been adequately addressed by the ES.

Indeed, I have advised the applicant that factual information in the ES regarding Conservation Areas and Listed Buildings is not entirely accurate.

The Conservation Manager concurs with CBA advice. The form, appearance, height and scale of the proposed wind farm fails to recognise that a key to the historic character of the area is the cumulative effect of its scattered clusters of modest settlements and estates, enclosed by mature planting and expansive arable fields.

Although neither Boxworth or Conington have conservation areas, there are such designations in Elsworth, Knapwell, Fen Drayton, Swavesey, Hilton and Fenstanton. The most significant impact in terms of distance to nearest turbine will be from Elsworth (approx 2.4km), Fen Drayton (approx 1.2km), Knapwell (approx 2.0km) and Fenstanton (2.1km). Direct line of sight views over a relatively short distance from Fen Drayton, in particular, will fail to preserve the character and appearance of this Conservation Area. In addition it is considered that the turbines will be prominent in views over Elsworth Conservation Area from elevated land on the minor road south west of the village.

As a consequence the scheme would be contrary to Structure Plan Policies P7/6 and P7/7 and Local Plan Policies EN4 and EN30.

e) Noise

89. The Council commissioned acoustic consultants, Belair Research Ltd to review the acoustic information provided in support of the application. At the time of preparing this report insufficient information/data has been provided by the applicant for the consultant to prepare an informed opinion. In summary he comments on the applicant's Addendum:

- (i) Construction noise is unlikely to cause problems (if properly managed).

- (ii) It is understood that the analysis have been carried out on the basis of down wind propagation to each noise monitoring location, in comparison with the background levels measured under the wind conditions prevailing throughout the survey period. There is insufficient information provided to assess the likely variations in background noise with varying wind direction such as at Conington where the downwind direction could be considered to be between north east and south east. Although this is unlikely to worsen the situation there is insufficient data to verify this and in view of the potential sensitivity of other locations and variability of meteorological effects this requires further consideration.
- (iii) Data measured at an acoustically similar location approximately 30 miles west of this site, beside the A14 indicates that the background noise level in this area is likely to fluctuate by several dB(A) depending upon meteorological conditions not generated by foliage noise.
- (iv) Data is provided showing wind speed and wind direction, but there does not appear to be sufficient information to correlate wind conditions and background noise levels.
- (v) The other noise sensitive locations have been raised as a concern, for the reasons stated in paragraph 67.4 above. This indicates that the Applicant has not provided sufficient information.

f) *Impact on wildlife and ecology*

90. It is clear that, in certain regards the ES has not adequately surveyed protected species or demonstrated that appropriate mitigation measures have been considered.

Further bat surveys are necessary to properly assess bat usage over the period of a year. This cannot be the subject of a planning condition because such material should be incorporated in the ES and should inform any necessary mitigation measures, which could be conditioned or which might entail changes to the proposed scheme.

The same principle applies to golden plovers. A detailed survey and assessment is included in the Addendum to the ES. Golden Plover numbers and movements were recorded in the vicinity of the proposed wind farm between 5th November 2005 and 30th January 2005. The assessment recommends that a programme of post-construction monitoring should be undertaken.

A Great Crested Newt Mitigation Plan has been agreed by English Nature, although this necessary information was not submitted with the ES. (It is included in the Addendum to the ES).

English Nature is satisfied that the site is unlikely to support protected reptile sites but recommends a further walk-over survey prior to any construction taking place.

Mitigation to any works affecting badger setts is still required to be agreed by English Nature.

In its present form, therefore, the proposal does not comply with Structure Plan Policies P1/2, P7/1 and P7/2 and Local Plan Policies EN12 and EN13. Further advice is awaited in this regard from the relevant consultees.

g) Efficient operation of radar installations and aircraft safety

91. The Defence Estates have commented that the site lies within coverage of the Airfield Radar at Cambridge Airport. The rotating blades on the turbines have the potential to produce false radar returns, which could compromise flight safety requirements. The Ministry of Defence, therefore, raises an objection to the development. This objection is endorsed by Cambridge City Airport.

The applicants commissioned a report by Cyrrus Associates “to determine the potential effects of the wind turbines on the aircraft operations at Cambridge Airport and to demonstrate/suggest mitigation that exists or could be employed (if appropriate).” The report is included in the ES at Appendix 7.

The Report concludes, inter alia, that “it is accepted that there is a potential impact on the ability of Cambridge Airport to offer a full radar service in the vicinity of the development under certain wind conditions.”

Members will have noted above the response to this by Cambridge Airport. In essence it considers flight safety would be jeopardized if the Airport could not provide a comprehensive radar information service.

Despite some discussions between the applicant, its Consultants, the Airport and Defence Estates, no agreement has been reached. The Airport position remains that approval would seriously compromise airport operations, including the potential loss of MOD approvals.

The applicant, in its position paper, concludes:

“It has been determined that the development is likely to have minimal impact on aircraft using Cambridge Airport as the flight paths of published Instrument Flight Rules procedures are well clear of the proposed development. It is accepted that there is a potential impact on the ability of Cambridge Airport to offer a full radar service in the vicinity of the development under certain wind conditions. However, changes to local Air Traffic Control (ATC) operating procedures to take account of the wind farm development would maintain the safety of the ATC service”.

It considers that the Airport has not shown any urgency in discussing the matter further.

I conclude that, in the absence of this objection being withdrawn, the scheme would potentially interfere with safe operation of the radar at Cambridge airport and this would undermine the safety of aircraft in the region contrary to advice in Circular 1/2003 *Safeguarding aerodromes, technical sites and military explosive storage areas*, which states at paragraph 15:

“The issue of these maps (safeguarding) recognises the fact that the introduction of wind powered generator turbines within the United Kingdom as part of an alternative energy policy can create certain problems for aviation. In addition to their potential for presenting a physical obstacle to air navigation, wind generator turbines can affect signals radiated from and received by aeronautical systems. The rotating blades create electromagnetic disturbance, which can degrade the performance of these systems and cause incorrect information to be received. The amount of interference depends on the number of wind turbines, on a wind turbine’s size, construction materials and location and on the shape of its blades.”

Further PPS22 (Paragraph 25) indicates that it is the responsibility of developers to address any potential impact before applications are submitted.

h) Health effects

92. Third parties have raised the issue of potential adverse health effects associated with noise and low frequency infrasound emissions. The impact of noise on sleep patterns is being considered by the Chief Environmental Health Officer.

The Companion Guide to PPS 22 indicates (Paragraph 45 of technical annex on wind) that “there is no evidence that ground transmitted low frequency noise from wind turbines is at a sufficient level to be harmful to human health.”

At Paragraph 65 the annex indicates that electromagnetic radiation from turbines “is at a very low level, and presents no greater risk to human health than most domestic appliances.”

I conclude that the scheme would be unlikely to pose a serious health risk.

i) Access and highway safety

93. This is one of the principal issues which has exercised the vast majority of third party objectors. The Highways Agency, which is responsible for the A14 Trunk Road, and the County Council, as Local Highway Authority, are both clearly concerned that the siting of these turbines could lead to an increase in rear-end shunt accidents, by virtue of distraction and volume of traffic using the A14. Moreover, STOPCWF detail the features along the A14 carriageways which already adversely affect road safety.

The Highways Agency clearly objects to the wind farm until the A14 has been improved. This is based upon a Report prepared by Consultants for the Agency: “Review of Accident Data Surrounding Wind Farms Across the U.K., December 2004.” This included before and after studies at five sites in Cornwall, a one turbine site at Kings Langley and the Angel of the North. Overall no relationship was found between road accidents and the installation of wind farms. However, the report analyses traffic flows during 2003 on the A14 at Swavesey:

A14, Swavesey: - Traffic Flows During 2003

	AADT (Annual Average Daily Traffic)	% HGV	No. of HGVs	Vehicles over 5.2m AADT
A14 Swavesey WB (2003)	35602	23.8	8473.3	8594.8
A14 Swavesey EB (2003)	36278	23.9	8670.4	8862.2

It also reports accidents for the most recent three year period (1st August 2001 to 31st July 2004 inclusive): 220 (82 eastbound carriageway; 122 west bound carriageway and 16 unclear) personnel injury accidents occurred in the study area during this period. One was fatal; 24 were serious; and 195 slight.

The Report concludes:

“High traffic volumes combined with significant numbers of heavy goods vehicles, many of which are foreign, lead to stressful driving conditions on this section of the A14. However, the accident rate is relatively low. Rated by EuroRAP as having a low to medium accident rate. This equates to between 15 and 61.5 fatal and serious accidents per billion vehicle kilometres. However, the high throughput of traffic results in a high total number of accidents.

The low accident rate and high traffic volume suggests drivers operate at peak concentration in order to avoid accidents as the road is operating close to capacity. In the peak hour, the presence of short on slips and regular queuing traffic create a confusing driving environment where the driver must concentrate intensely.

The accident record shows a high number of rear-end shunt type accidents, which is a pattern consistent with driving conditions on this section of road.

The proposed turbines will be 100m high, this makes them some of the largest wind turbines yet proposed in the UK. PPG 22 requires that such turbines should be sited at a distance at least equal to their height from roads, to reduce driver distraction, in this instance they are sited at more than twice that distance from the A14. (PPS 22 Companion Guide advises a set back of at least fall over distance to achieve maximum safety).

At the A14 site the wind farm will be visible from a considerable distance due to the open flat nature of the landscape. When drivers first see the wind farm the turbines will appear less prominent as they will be viewed from a considerable distance. This means that there will be no element of surprise as drivers approach the site.

However, they may be the object of curiosity and the introduction of a potential distraction along this already complex section of road may cause drivers to temporarily divert their attention from the road ahead, leading to an increase in the number of accidents.

Notwithstanding the lack of evidence of an effect on safety, the PPG22 guidance and the long preview that drivers have, the wind farm is likely to add an element of distraction however the assessment of distraction is subjective and difficult to quantify.

The Cambridge to Huntingdon Multi-Modal Study CHUMMS (2001) report highlighted the need for upgrading of the A14 between Cambridge and Huntingdon. Current proposals, A14 Ellington to Fen Ditton improvement as part of the Governments' targeted programme of improvement (TPI) include upgrading to a three-lane dual carriageway and provision of a parallel distributor road for local traffic between Fenstanton and the Girton Interchange. The next stage in the development process is public consultation. It is the Highways Agency's intention to progress the scheme through its design and statutory processes to be considered for construction when the next round of funding becomes available in 2008 and onwards.

It is therefore concluded that the wind farm should be delayed until after the upgrading of the A14, when a safer environment for drivers has been constructed on this complex section of road.”

In response the applicant commissioned a planning assessment of highways safety and wind farm development. The Author has had relevant experience since 1992. Many sites, developments and appeal decisions are referred to. The principal summary points are:

1. No empirical evidence has been brought forward to demonstrate that there has been a direct causal link between the presence of wind turbines and accidents on major or indeed minor roads. The only two appeal cases where a possible risk was cited by an Inspector were not based on any evidence but on the particular nature of the turbines involved or the topography of the ground and alignment of the roads involved.
2. In the present case, unlike an appeal decision in Northumberland, the terrain is very different, such that the turbines come into view very much earlier and remain in view almost throughout the journey past the site. The road itself is straight and level such that the turbines do not appear and disappear and then come into view in an unexpected place.
3. Turbines are becoming a more and more common feature of the countryside such that it is highly unlikely that drivers on the A14 would never have encountered one before.
4. The precautionary principle cannot be applied in a case where there is ample opportunity for the risks to have occurred at sites elsewhere and where despite detailed research no such evidence has been uncovered. Sites adjacent to motorways and trunk roads across the country have been developed already and more are the subject of current proposals where no Highway Agency objection has been raised. The issues of both driver distraction and shadow flicker are not ones that could ever be supported in the present case both on the basis of the past record of turbines in relation to roads and the nature of the terrain and road system involved here.

The applicant's assessment quotes Paragraph 54 from the Technical Annex for Wind in the Companion Guide to PPS22:

"Concern is often expressed over the effects of wind turbines on car drivers, who may be distracted by the turbines and the movement of the blades. Drivers are faced with a number of varied and competing distractions during any normal journey, including advertising hoardings, which are deliberately designed to attract attention. At all times drivers are required to take reasonable care to ensure their own and others' safety. Wind turbines should therefore not be treated any differently from other distractions a driver must face and should not be considered particularly hazardous. There are now a large number of wind farms adjoining or close to road networks and there has been no history of accidents at any of them."

Nevertheless, having regard to the particular circumstances experienced on the A14 Trunk Road, the scale and proximity of the proposal to the road, the nature of representations on this issue and the Government's recognition of the need for improvements, I believe the Highways Agency's caution is well founded.

On 9th March 2005 the Department for Transport announced that public consultation will start on 30th March with public exhibitions to start from 4th April 2005. However, the earliest that a start can occur has been stated to be 2008/09 with completion in the period 2011-2015, beyond the five year life of any planning permission. DOE

Circular 11/95, "The Use of Conditions in Planning Permissions", advises at Paragraph 40 that:

"It is the policy of the Secretary of State that such a condition (depending on others' actions) may be imposed on a planning permission. However, when **there are no prospects at all** of the action in question being performed within the time-limit imposed by the permission, negative conditions should not be imposed. In other words, when the interested third party has said that they have no intention of carrying out the action or allowing it to be carried out, conditions prohibiting development until this specified action has been taken by the third party should not be imposed."

A footnote adds:

"A policy of refusing permission where there was no reasonable prospect of planning conditions being met could be lawful, but sound planning reasons for the refusal should be given and it should be made clear that this was only a starting point for consideration of cases."

I conclude that a planning condition could not be imposed in this particular case and that there are sound reasons for objecting to this application on highway safety grounds.

(j) Impact on T.V. reception

94. The response from NTL, on behalf of Ofcom, indicates that homes to the north east of the site, particularly in Swavesey and Fen Drayton, may experience interference problems. The same may be said of homes close to the development, irrespective of the direction. However, large scale problems are not expected.

The ES indicates that interference can only occur to the analogue system, not digital. Solutions (including improvements to aerial installations, aerial alignment, replacement by satellite services or the boosting of the network signal) would be carried out at the developer's expense. An appropriate planning condition requiring a scheme for investigation and alleviation of any such interference could be imposed.

(k) Impact on safety though icing

95. This is referred to by many third party objectors. Advice from the Companion Guide to PPS22 (Paragraph 79 Technical Annex on Wind) indicates that:

"The build-up of ice on turbine blades is unlikely to present problems on the majority of sites in England. For ice to build up on wind turbines particular weather conditions are required, that in England occur for less than one day per year. In those areas where icing of the blades does occur, fragments of ice might be released from the blades when the machine is started. Most wind turbines are fitted with vibration sensors which can detect any imbalance which might be caused by icing of the blades; in which case operation of machines with iced blades could be inhibited." An appropriate planning condition requiring the fitting of such sensors could be imposed.

(l) Shadow flicker

96. In certain circumstances the sun may pass behind the rotors of a wind turbine and cast a shadow over neighbouring properties. The shadow will flicker when the blades rotate.

It only occurs inside buildings where the flicker appears through a narrow window opening. Only properties within 130 degrees either side of north, relative to the turbines can be affected in the U.K. In this case the potential effect could be felt up to 800m from a turbine (10 x rotor diameter).

The ES assessment of such properties concludes that four properties in Conington and Grapevine Cottages, Boxworth may experience a passing shadow from turbines 11 and 16 respectively. It is concluded that times can be programmed into the controllers, which, along with light and wind sensors, will result in those turbines automatically being shut down under worst case conditions.

A planning condition could be imposed to ensure the implementation of such measures.

Conclusion

97. In assessing this scheme, the Council must take into account the benefits claimed by the applicant in support of the proposal. The applicant has identified the main benefits as follows:
- Significant contribution to the savings in the emissions of carbon dioxide, sulphur dioxide and oxides of nitrogen.
 - Production of renewable electricity from wind energy which would produce virtually no emissions during their operation life. Over their lifetime they can repay up to 50 times the energy used in their manufacture and installation.
 - The electricity generated is likely to be equivalent to the needs of over 19,000 households, which is equivalent to approximately 37% of the District's domestic needs.
 - Suitably qualified local contractors will have the opportunity to bid for the civil and electrical works and the provision of site services.
 - Provision of permanent part-time employment for a Site Manager and Fitter during operation and maintenance.
 - Reliable income stream for the landowner and an educational resource for local schools and colleges.
 - Following construction the developer would register local interest in a community energy efficiency scheme.
98. In weighing these matters it is important to note that the identified savings may be exaggerated together with the overall level of efficiency when compared with conventional electricity generation. Although there would be some economic benefits, it is not clear to what extent this would benefit the local economy.

Set against the scheme's ability to contribute to renewable energy targets, is the predicted adverse harm to landscape and open rural character, the impact to the historic landscape of this part of the District, the adverse effect on the airfield operation of the radar installation at Cambridge City Airport; and the adverse impact upon safety for users of the A14 Trunk Road.

99. This balance reflects the difficulties in reconciling two of the environmental issues highlighted in PPS1:
- (a) Adaptation to climatic change through the reduction of greenhouse gas emissions and use of renewable energy; and
 - (b) The protection of the wider countryside and impact of development on landscape quality.
100. In this case I consider that the landscape and visual harm of a development of this scale, in this location, outweighs the benefits. Furthermore the harm to highway and air safety adds weight to the conclusion that the application is unacceptable.
101. I consider that the scale of the proposal is such that the predicted impacts are not entirely capable of being mitigated through the use of conditions.

102. **Recommendation**

Refuse

1. The scheme, by virtue of the size, scale and extent of the wind turbines, would dominate and adversely affect the landscape character of the area, particularly the open and gently undulating rural character of the area. As a consequence it conflicts with Structure Plan 2003 Policies P7/4 and P7/7, South Cambridgeshire Local Plan 2004 Policies EN1 and EN44 and national advice in PPS1, PPS7 and PPS22.
2. The scheme, by virtue of the size, scale and extent of the wind turbines, would adversely affect the historic landscape pattern by introducing intrusive and standardised industrial forms which will visually connect Boxworth and Conington, in particular, and by virtue of its dominating impact upon the setting of and views from Conservation areas, particularly Elsworth and Fen Drayton. As a consequence it fails to comply with Structure Plan 2003 Policies P1/2, P7/6 and P7/7, South Cambridgeshire Local Plan 2004 Policies EN4, EN30 and EN44 and national advice in PPS1, PPS7 and PPG15.
3. The scheme would harm the effective operation of the radar installation at Cambridge City Airport and therefore be detrimental to the safety of aircraft in the area contrary to national advice in Circular 1/2003 "Safeguarding aerodromes, technical sites and military explosive storage areas" and PPS22.
4. The scheme, by virtue of the size, scale and extent and proximity of the wind turbines to the A14 Trunk Road, would be likely to cause drivers to temporarily avert their attention from the road, thereby increasing the risk to highway safety on this road, which is subject of high volumes of traffic, congestion and a high percentage of tail-end shunt accidents. Further the imposition of a condition precluding work from starting on the wind farm until such time as the A14 Improvement Scheme has been completed is considered to be unreasonable, given that there is no prospect of the scheme being completed during the time limit of a permission.
5. The applicant has failed to demonstrate that the operation of the wind turbines would not be likely to give rise to unacceptable noise levels to residents by reason of insufficient information having been provided upon variations in

background noise with varying wind direction, alternative locations and varying meteorological conditions.

6. The applicant has failed to demonstrate that the operation of the wind turbines would protect or enhance wildlife species and habitat, particularly in regard to bats, golden plovers and badgers. The proposal would not therefore comply with Structure Plan Policies P1/2, P7/1 and P7/2 and South Cambridgeshire Local Plan Policies EN12 and EN13.

Background Papers: the following background papers were used in the preparation of this report:

- Planning Policy Guidance and Statements.
- Regional Planning Guidance 6: East Anglia
- East of England Plan (Draft revision to the Regional Spatial Strategy – December 2004)
- County Structure Plan 2003
- South Cambridgeshire Local Plan 2004
- Planning Application File Reference: S/1663/04/F

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