

SOUTH CAMBRIDGESHIRE DISTRICT COUNCIL

REPORT TO: Planning Committee

2nd September 2009

AUTHOR/S: Executive Director / Corporate Manager - Planning and
Sustainable Communities

S/0232/09/F - LINTON

Installation of seven wind turbines and associated infrastructure to include access tracks, crane hardstandings, temporary construction compound, switch house and cables at land to the south west of Little Linton farm, Cambridge Road, for Enertrag UK Ltd

Recommendation: Minded to refuse

Date for Determination: 24 June 2009

This Application has been reported to the Planning Committee for consideration because it is a major application on which an appeal has been lodged and which will be considered at a public inquiry.

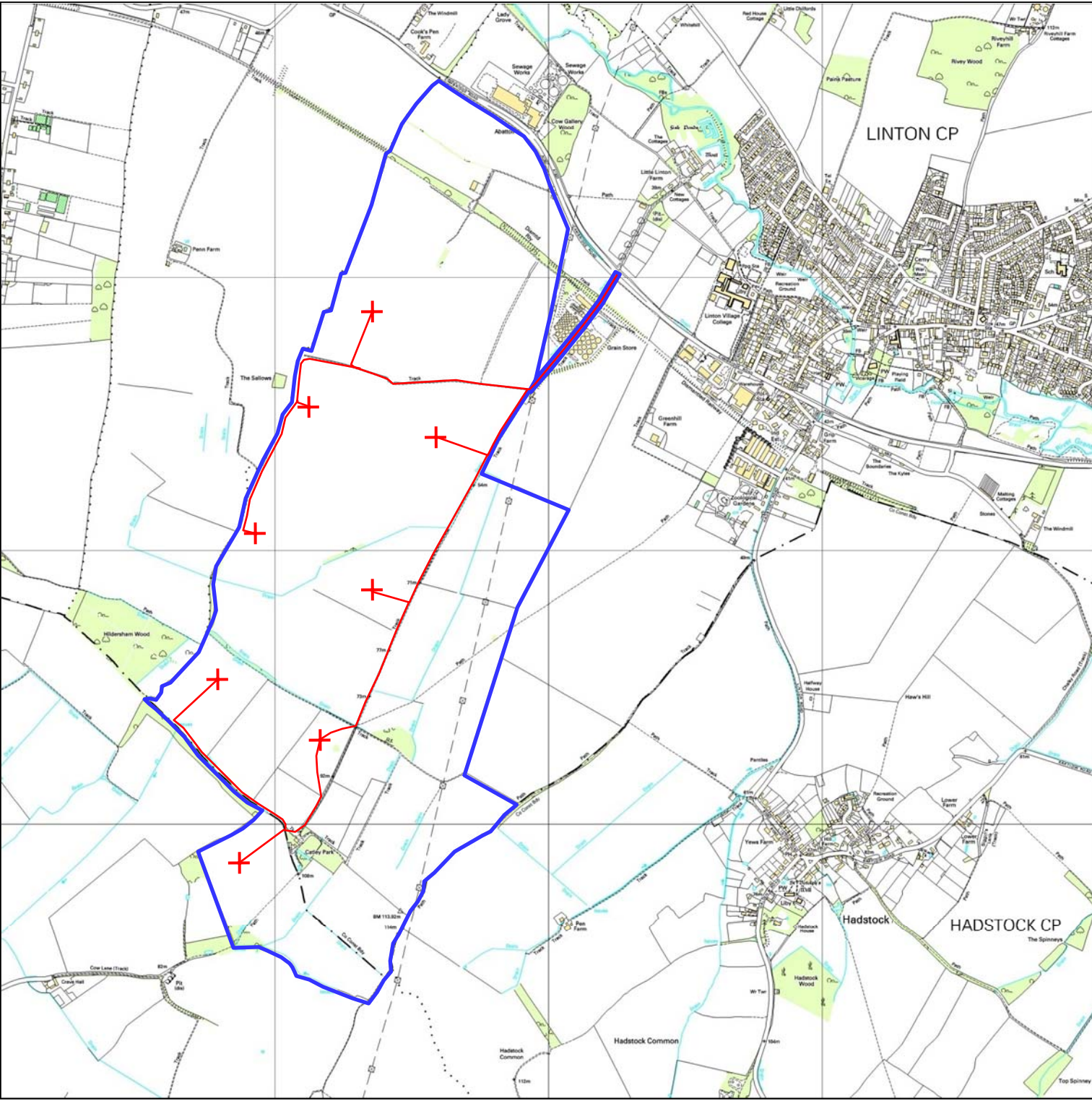
Members will visit this site on Wednesday 2 September 2009.

Appeal

1. This planning application is the subject of an appeal against non-determination by the Local Planning Authority. The appeal is to be heard at a public inquiry, at a date to be determined. The purpose of this report is to provide an opportunity for the view of the Planning Committee to be presented at the inquiry. Because the application is the subject of an appeal, it cannot be determined by the local planning authority

Site and Proposal

2. The site, which extends to some 9.67 hectares (according to the application form), is an area of elevated and sloping agricultural land that varies in height. The site is elevated, with the lowest turbine (T2) being set at approximately 65m AOD, and the highest (T7) at approximately 107m AOD. This is in contrast to the local settlements of the Granta Valley which are mostly contained below the 50m AOD contour. The site is located adjacent to Hildersham Wood SSSI. National Grid high voltage overhead pylons, approximately 50 m in height, run along the eastern boundary of the site approximately 300 m from the nearest proposed turbine.
3. The site is bounded to the north and east by the premises of Camgrain, a large complex of grain storage hoppers, and beyond that the dual carriageway of the A1307. Public rights of way are located around the site. A bridleway follows the eastern boundary and a network of public footpaths follow the southern boundary and dissect the southern area. A public footpath runs northwest to southeast, to the north of turbines six and seven. A bridleway also runs in the north-west corner of the site area.
4. The edge of the village of Hildersham is situated approximately 0.5 km to the north of the nearest turbine and the edge of Linton is approximately 0.5 km north east of the site boundary. Both Hildersham and Linton are separated from the site by the A1307.



Great Abington is located approximately 1.9km to the north west of the site. The village of Hadstock is over 1.5 km east of the southern end of the site. The nearest dwellings are a minimum of 700 m from the turbines.

5. The site of a second proposed wind farm, at Wadlow Farm, West Wratting, is located some 7 kilometres to the north of the site. The proposal is to erect 13 turbines of a similar size to the current proposal.
6. The full application, registered on the 4 March 2009, proposes a wind farm comprising seven turbines within South Cambridgeshire District. An eighth turbine within the scheme falls within Uttlesford District Council's area. Each turbine would have three blades, a hub height of up to 80 m and a blade diameter up to 90 m. The total height of the turbines to blade tip will be dependent on the exact model selected, but would be a maximum height of 125 m. The maximum installed capacity of each turbine would be 2 megawatts, giving a total installed capacity of the scheme of 16 MW. The turbine towers are to be constructed of steel, the nacelle at the top of the tower is also to have a steel casing. The diameters of the towers at the base are to be approximately 4 metres. The turbine foundations will consist of a concrete base approximately 4 m in diameter, situated between 1.5m and 3.0 m below ground level. Piling may be necessary, subject to further investigation of ground conditions.
7. Access tracks would be constructed from the A1307 to each of the turbines and each turbine would require a concrete hardstanding for cranes which would be required during construction and final decommissioning and possibly during on-going maintenance. Each turbine would take approximately one week to assemble on-site which would require two cranes. Delivery of each turbine tower would require 11 low loader vehicles. The longest section would be up to 54 m in length and the heaviest section would weigh approximately 62 tonnes. Normal working hours would be Monday to Saturday, from 7 a.m. until 7 p.m. or dusk.
8. Cables would be run underground to a switch house on site. This building is to be single-storey 10m by 5m by 4.2m high, located by Turbine 1 (T1). From there, cabling would run to a local sub-station on Rivey Hill. The route for the off-site cabling does not form part of this application, and would not require planning permission. An indicative route has been shown via the road network through Hildersham.
9. The expected operational life of the wind farm is 25 years from the date of commissioning. At the end of the working life of the wind farm, the turbines would be decommissioned and the ground surface reinstated to its former condition. Below ground foundations and cabling would remain. Operationally, the turbines would be controlled according to wind speed. Typically, they would cut out at wind speeds of between 34 and 46 m per second. The turbines would be remotely monitored by a telemetry system to a central control point.
10. The applicant claims that the wind farm would have an annual output of 42,048 MWh, the equivalent electricity consumption of 8,946 households and that this would save approximately 18,081 CO₂ tonnes a year.
11. The applicant is willing to establish a 'trust fund' which will "be available to the neighbouring communities and will be available for projects for local schools and community groups (Design and Access Statement, p.3) and have undertaken a "programme of public consultation". The trust fund would be available throughout the 25-year lifetime of the wind farm.

12. The following documents have been submitted with the application, which are on the Council's website page for this application:

An Environmental Statement covering the following issues:

- (a) Project details
 - (b) Legislative context and the EIA process
 - (c) Energy and Planning Policies
 - (d) Site Selection
 - (e) Ecology and Ornithology
 - (f) Geology and Hydrology
 - (g) Landscape and Visual Character
 - (h) Cultural Heritage
 - (i) Archaeology
 - (j) Traffic and Access
 - (k) Noise and Vibration
 - (l) Shadow Flicker
 - (m) Electromagnetic Interference
13. In addition the following documents have been submitted:
- (a) Design and Access statement
 - (b) Visualisations
 - (c) Arboricultural Implications Assessment
 - (d) Aircraft Routes and Airspace Supplement
14. A non-technical summary of the Environmental Statement is available.

Planning History

15. **Uttlesford District Council** refused planning permission reference **UTT/0232/09/FUL** for Turbine 8 on 25 June 2009. The reasons for refusal were:

1. Notwithstanding the positive aspects of the proposal in contributing towards regional and national targets for renewable energy and reduction in carbon emissions, the scale of the proposal, together with the topography of the site will result in a significant harm to the area. The proposed turbine would be located on a prominent ridge in a rural area where there is a wealth of public rights of way. The siting of the turbine would lead to a loss of visual amenity in the area potentially resulting in detraction from the recreational enjoyment of the area. In addition the turbine would appear as a visually prominent feature having a detrimental impact on the character of the Hadstock Conservation Area and the setting of the listed buildings. The proposals would be contrary to the adopted Uttlesford Local Plan Policies ENV1 and ENV2, advice contained in PPG15. The environmental impacts of the proposal are not satisfactorily addressed as required by PPS22 and PPS1.
2. The background noise data has been collected from positions not immediately adjacent to an elevation of the noise-sensitive properties and as such background noise levels are likely to be higher than if they had been measured adjacent to the dwelling. In addition, no consideration appears to have been given to the potential for wind speeds at noise-sensitive properties to be lower than those at the turbine, a fact that could be exacerbated by the topography of the area. As such there is the potential for the proposed turbine to operate at noise levels that would exceed the criteria set out in ETSU-R-97 and this would also be contrary to ULP Policy GEN4.

3. Objections in relation to operational impacts on radar have been received from Defence Estates and NERL Safeguarding. PPS22 places the onus on the applicant to demonstrate that the proposal would have no adverse effect on aviation interests and this has not been demonstrated.
16. A Scoping Opinion (an indication by the local planning authority of the issues required to be covered in the Environmental Statement) in respect of a proposed wind farm given in May 2007.
17. Temporary permission has been granted until 30 September 2010 for a 50m anemometer mast on the site under references **S/0847/08/F**. The anemometer mast that has been erected is located close to the point proposed for Turbine 5.
18. Wadlow Farm, West Wrattling **S/1018/06/F**: This site is located 7m to the north of the current proposal. Planning permission for the erection of 13 wind turbines, each 120m in height, was refused on 7 June 2007. The reason for refusal referred to the substantial harm to the character and quality of the landscape by the development. An appeal was lodged by RES Developments Ltd on 7 December 2007. A Public Inquiry was held 9-19 June and 7-8 July this year. The decision of the Secretary of State is expected mid- November.

Planning Policy

National Guidance

19. **The Climate Change Act 2008** became law on 26 November 2008. It sets legally binding targets for reducing UK greenhouse gas carbon dioxide emissions.
20. Planning Policy Statement (**PPS**) **1**, 'Delivering Sustainable Development', (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. At the same time, it confirms that development plan policies should take account of environmental issues such as mitigation of the effects of climate change through the reduction of greenhouse gas emissions and the use of renewable energy.
21. A supplement to PPS 1 entitled '**Planning and Climate Change**' was published in December 2007. The statement confirms that the government believes climate change is the greatest long-term challenge facing the world today. Tackling climate change is a key government priority for the planning system. This includes setting targets in Regional Spatial Strategies for renewable energy generation and ensuring any local approach to protecting the landscape is in line with PPS 22. The PPS states, at Paragraph 22:
22. "Planning authorities... should: look favourably on proposals for renewable energy, including on sites not identified in development plan documents; not require applicants to demonstrate either the overall need for renewable energy and distribution or for a particular proposal for renewable energy to be sited in a particular location; avoid policies that set stringent requirements for minimising impact on landscape and townscape if these effectively preclude the supply of certain types of renewable energy, and therefore other than in the most exceptional circumstances such as within a nationally recognized designations, avoid such a restrictive policies".
23. **PPS 7**, 'Sustainable Development in Rural Areas', (2004) 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.

24. Planning Policy Guide **PPG 8** 'Telecommunications' advises on the potential for disturbance to television and other telecommunications signals and the need to investigate possible engineering solutions to such matters.
25. **PPS 9**, 'Biodiversity and Geological Conservation', (2005) sets out Government's objectives for 'biodiversity and geological conservation'. Planning decisions should aim to maintain and enhance, restore or add to biodiversity and geological conservation interests. Development proposals should be permitted where the principal objective is to conserve or enhance biodiversity and geological interests. If significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.
26. **PPG 15**, 'Planning and the Historic Environment', (1994) provides guidance in respect of development which will affect the historic and built environment. The historic environment includes not just buildings, but encompasses the wider landscape. It indicates that development may affect the setting of a Listed Building some way away.
27. **PPG 16**, 'Archaeology and Planning' advises that the duty to protect archaeological sites and monuments extends to their setting. Para 27 advises that there is 'a presumption against proposals which would involve significant alteration or cause damage, or which would have a significant impact on the setting of visible remains.'
27. **PPG 17** 'Planning for Open Space, Sport and Recreation' supports the enhancing of the rights of way network in the countryside.
28. **PPS 22**, 'Renewable Energy' (2004). This aims to increase the development of renewable energy resources. Amongst key principles are:
 - (a) 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.
 - (b) 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.
 - (c) 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.
 - (d) 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.
29. The PPS sets out the government's objectives and the need to generate a minimum of 10% of UK electricity from renewable sources by 2010 (with onshore and offshore wind being the largest contributors) and up to 20% by 2020 (with onshore and

offshore wind biomass being the largest contributors). The fact that a target has been met is not a reason to refuse planning permission for further projects.

30. When considering landscape and visual effects Paragraph 19 notes these are likely to vary on a case-by-case basis according to the type of development, its location and landscape setting. Some of these effects may be minimised by appropriate siting, design and landscape schemes. Paragraph 20 goes on to state that the impact of turbines on the landscape will vary according to the size and number of turbines and the type of landscape involved. These impacts may be temporary if conditions are attached to planning permissions which require the future decommissioning of turbines.
31. **‘Planning for Renewable Energy: A Companion Guide to PPS 22’ (2004)** identifies the key issues in determining planning applications. It is designed to encourage appropriate development and offers practical advice as to how policies can be implemented on the ground. At para 5.10 authorities are advised to come to an objective view on:
 - (a) The extent to which the project is in conformity with the development plan;
 - (b) The extent to which the reasons for any area based designations may be compromised;
 - (c) The extent of any positive or negative impacts, and the means by which they may be mitigated, if negative; and,
 - (d) The contribution towards meeting the regional target, but recognising that a small contribution cannot be in itself a reason for refusal of permission.
32. The Companion Guide includes a detailed technical annex upon wind. It covers issues such as noise, low frequency noise, landscape and visual impact, driver distraction and shadow flicker. It states at Para 5.4, that landscape and visual effects will only be one consideration to be balanced alongside the wider environmental, economic and social benefits.
33. **PPG 24 ‘Planning and Noise’ (1994)** states that noise can be a material consideration in the determination of planning applications. Development should not cause an unacceptable degree of disturbance.
34. Para 15 of **Circular 1/2003, ‘Safeguarding Aerodromes’**, advises that wind turbines can create certain problems for aviation. This includes signals radiated from and received by aeronautical systems.

Regional and Local Policies

35. **The East of England Plan (2008)**
Policy **ENG1**, ‘Carbon Dioxide Emissions and Energy Performance’, identifies the need to meet regional and national targets for reducing climate change emissions. Local authorities should encourage the supply of energy from decentralised, renewable and low carbon energy sources.
36. Policy **ENG2 ‘Renewable Energy Targets’** supports the development of new facilities for renewable power generation with the aim that by 2010, 10% of the region's energy and by 2020, 17% of the region's energy should come from renewable sources. These targets exclude energy from offshore wind and are subject to meeting European and international obligations to protect wildlife. The onshore targets for

installed capacity equate to at least 820 MW by 2010 and 1620 MW by 2020 for the region.

37. Policy **ENV2** 'Landscape Conservation' states that planning authorities should recognize and enhance the diversity and local distinctiveness of identified countryside character areas. Where damage to local landscape character is unavoidable, appropriate mitigation measures should be secured. The countryside character areas are identified in Figure 6 of the Plan, although this incorrectly defines the area covered by the East Anglian Chalk as 'Thames Valley'.
38. Policy **ENV3** (Biodiversity and Earth Heritage)
39. Policy **ENV6** (The Historic Environment)
40. Policy **T9** (Walking, Cycling and other Non-Motorised Transport)
41. **South Cambridgeshire Local Development Framework Core Strategy DPD (2007)**
This sets out a number of objectives. Amongst others they aim to ensure development addresses sustainability issues, including climatic change mitigation, protects and enhances native biodiversity and protects and enhances assets of conservation importance and the character of the landscape.
42. **South Cambridgeshire Local Development Framework Development Control Policies DPD (2007)**
43. In respect of renewable energy, Policy **NE/2** "Renewable Energy", and the supporting text states:
44. "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/3 and complying with the following criteria:
 - (a) The proposal can be connected efficiently to existing national grid infrastructure unless it can be demonstrated that energy generation would be used on-site to meet the needs of a specific end user;
 - (b) The proposal makes provision for the removal of the facilities and reinstatement of the site, should the facilities cease to be operational.
- Supporting text Paragraphs 7.6 - 7.8 inclusive**
45. "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.
46. "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".
47. Policy **NE/4** "Landscape Character Areas", states that:" Development will only be permitted where it respects and retains or enhances the local character and distinctiveness of the individual Landscape Character Area in which it is located".
DP/1 (Sustainable Development)

DP/2 (Design of New Development)

DP/3 (Development Criteria)

48. Policies **DP/1-DP/3** deal with issues relating to sustainable development, design and a checklist for development criteria.

ET/9 Farm Diversification

SF/9 (Protection of Existing Recreation Areas)

CH/1 (Historic Landscapes)

CH/2 (Archaeological Sites)

CH/4 (Development Within the Curtilage or Setting of a Listed Building)

CH/5 (Conservation Areas)

NE/6 (Biodiversity)

NE/7 (Sites of Biodiversity or Geological Importance)

NE/11 (Flood Risk)

NE/15 (Noise Pollution)

49. Developments Affecting Conservation Areas Supplementary Planning Document (2009)

Listed Buildings Supplementary Planning Document (2009)

Biodiversity Supplementary Planning Document (2009)

Consultation

Parish/Town Councils

South Cambridgeshire Parish Councils

50. **Babraham Parish Council:** No recommendation. Lack of information provided which is specific to Babraham.
51. **Balsham Parish Council:** Refusal. Concern about safety on the A1307; overbearing effect on the village of Linton; unacceptable impact on Linton Zoo and the breeding programme; unacceptable impact on Linton Village College.
52. **Bartlow Parish Council:** No recommendation.
53. **Great Abington Parish Council:** Refusal. There are unknown health hazards, particularly due to ultrasound and vibration; the turbines will be very near a large number of houses in Great Abington, Linton and Hildersham; the visual impact on the surrounding countryside would be very great; the turbines will be very near the A1307 and will present a distraction to drivers, particularly at Hildersham and Bartlow crossroads; adverse effect on local wildlife, particularly the bat population.
54. **Hildersham Parish Council:** Refusal.

Landscape/environmental issues:

55. Disagree with the applicant's statement that this is "an area without any specific landscape value". This is a glacial valley created during the East Anglian ice age and is unique in Cambridgeshire.

56. Hildersham Wood is not only a SSSI but is the last remaining ancient wooded area in a landscape that was originally fully wooded and it still has the same footprint since the Norman Conquest.
57. Concern for the local bird and wildlife.
58. Concern that the impact on Linton Zoo.
59. Concern about noise and light pollution.
60. The whole of Hildersham and the Linton Village College is within 2 km of the turbines. In Scotland, the planning application would have immediately been rejected, as was the case in other European countries.
61. Once an industrialised site has been established this could open the door to other heavy industries that needed a large power supply.
62. This area of the country is known to have the worst available wind supply. One resident has carried out his own wind strength survey, and in a 45-day period the wind had only been sufficient to drive the turbines for nine days or 20% of the time.

Health and nuisance issues:

63. The evidence from a documentary seen at a recent public meeting was that the old, the young and the people with special needs were the most susceptible to the effects of the turbines. Nobody could give the Parish Council a guarantee that the turbines would not have a health effect, or would not disrupt or affect the learning potential of our area's bright young teenagers.
64. Noise and flicker problems. Hildersham is a very peaceful and quiet rural community; the proposed wind farm would completely destroy this.
65. Loss of TV, radio and mobile phone signals is a major concern. Loss of the value of local property and homes.
66. Driver distraction on local roads, A1307 and back roads. The Highways Agency advice is that a clear view from distance would considerably reduce the temptation for drivers to turn their heads when passing the towers. The proposed location would give very little warning in either direction and therefore poses a large distraction problem.
67. In conclusion, Hildersham Parish Council fully supports a green energy supply for the United Kingdom, and in principle this scheme is needed, but this is a completely inappropriate location.
68. **Horseheath Parish Council:** Refusal. Too close to Linton and Hadstock -- about a mile when the rest of Europe has a limit of 4 km; low frequency noise; TV and mobile interference; distraction from the A1307; negative effects on Linton Zoo. However, some councillors supported the project because they approved of the use of renewable energy.
69. **Linton Parish Council:** "The Council recommends refusal of the application on the following grounds:
 1. **The proposed turbines, by reason of their size and location, would neither respect, retain nor enhance the character of the local landscape,**

contrary to Development Control Policy NE/4 of the approved Local Development Framework.

The local landscape is characterised by the presence of rolling ridges and the river valley. It forms a zone of transition between the flatter tablelands of the North East Essex area where the Granta and its tributaries rise, and the lower landscape of the Granta and Cam valleys to the north of the A505. It is a distinctively attractive but relatively fragile landscape which has already been affected to a limited degree by the presence of electricity pylons, and by local agriculture-related enterprises which have particular reasons for being located in the vicinity of the village.

2. **The proposed turbines, by reason of their size and location, would damage the distinctiveness of the individual landscape character of the area within which they would be located, contrary to Development Control Policy NE/4 of the approved Local Development Framework.**

The Granta Valley is a major feature of the East Anglian chalkland character area identified in the Local Development Framework in accordance with Policy ENV2 of the Regional Spatial Strategy. The ridges on either side of the mid-Granta valley, the ridge on which the turbines would be located and the Rivey ridge, are the most significant pair of valley ridges in the county and can be observed from a wide area. The quality of the local landscape has not been significantly compromised by the existing pylons, given their limited height and static nature. If permission is granted a condition should be imposed requiring the various components of the turbines to be finished in a colour which will minimise their impact on the landscape.

3. **The proposed turbines, by reason of their size and location, would be readily visible from many points within the village conservation area, the only conservation area designated as “Outstanding” within South Cambridgeshire, and from within the curtilage of a large number of the 123 listed buildings within the parish boundaries. The development would damage, and not preserve or enhance, listed buildings and their settings and would adversely affect the appearance and appreciation of the outstanding conservation Area. Approval of the application in those circumstances would be contrary to the advice set out in paragraph 11 of PPS 22, Renewable Energy.**

The Parish Council notes that the photomontages prepared by the applicant are generally taken from outside the village envelope and requests that an independent assessment is commissioned of the possible impact of the proposals on the Conservation Area, particularly in the vicinity of significant listed buildings. The setting of the Linton High Street conservation area, with its 75 listed buildings is particularly important and it is believed that full turbine heads will be seen in this area. Whilst Local Plan Policy EN30 has been formally superseded, pending new guidance within the LDF, the spirit and principles of EN30 should be applied to this application, namely that the application should be accompanied by sufficient details to allow the impact of the proposal to be assessed. The application fails to do so.

4. **The proposed turbines, particularly by reason of the creation of low frequency noise and blade flicker, are likely to damage the programme of the Linton Zoo which has for many years been a leading centre for the breeding of rare and endangered species from a variety of habitats around the world.**

The Linton Zoo is also a major tourist attraction and any development which risks endangering the long-term success and popularity of the Zoo is liable to

damage the local economy of the village, particularly through the loss of employment opportunities. The Council asks that the District Council obtain technical advice from a recognised national body. It does not appear from the material produced by the applicants that they have appreciated the full stature of the Zoo as a breeding centre. If permission is granted, a condition should be imposed that if the Zoo subsequently detects that the operation of the wind farm is causing adverse effects on its work and animals, its operation should be required to cease immediately until those problems are satisfactorily addressed.

5. **The proposed turbines are likely to generate noise which will have an unacceptable adverse impact on an area of countryside which is important for countryside recreation contrary to Development Control Policy NE/15 of the approved Local Development Framework.**

The proposed turbines would be close to public bridleway No. 7 which forms one of the major routes between the Cam and Granta valleys, particularly for horses. The British Horse Society recommends a minimum distance of 3 x turbine height between a bridleway and a turbine (formerly 200m). One of the turbines would be within 100 m of the bridleway and four less than 3 x turbine height away. It is also understood that the Countryside Services Team of the County Council have expressed concern over the use of the bridleway as a haul road. The views of the British Horse Society regarding suitable surfacing material should be sought and if permission is granted a condition requiring the material to be one approved by the Society should be imposed. In addition the Icknield Way, which links two national long distance trails, runs parallel to the Bridleway 7 and its enjoyment would be measurably reduced by the close proximity of the turbines. The local footpath network is also used by many visitors to the area for shorter distance walks because of its attractiveness and easy access by private car and frequent public transport links.

6. **The proposed turbines are likely to generate noise which will have an unacceptably adverse impact on the environment of existing development contrary to Development Control Policy NE/15 of the approved Local Development Framework.**

The Parish Council acknowledges that the proposed turbines would be more than the advised minimum distance from residential development generally. It asks the District Council to check by measurement whether any properties are within 700m of any proposed turbines.

The Parish Council also has the following specific concerns:

- (a) the applicants have failed to demonstrate that their analysis of noise effects complies with the methodology advised in the 1997 ETSU report. The analysis should also be shown to encompass differing atmospheric conditions, times of day and season.
- (b) the Parish Council is aware that in a small proportion of cases, the ETSU methodology has failed to adequately estimate the noise consequences of turbines in particular locations, and existing impacts, including television reception, demonstrate that the local geography possesses unusual characteristics. In the case of Linton, the village is downwind of the prevailing wind which would pass the turbines towards the village, which is encircled by higher ground within its river valley.
- (c) the turbines would be only a short distance beyond the recommended minimum distance for pupils studying at the Village College

(comprehensive school) and the Linton Granta (special needs) school, for whom peace and quiet when studying is important.

- (d) the local community and those schools are already subject to significant noise from the A1307 and the Camgrain drying equipment by reason of their location within the valley. The noise is continuous throughout the day and night, particularly in the case of the Camgrain site at certain times of the year, which has been the subject of complaint. The District Council should ensure that the interrelationship between existing noise sources and the proposed turbines is adequately investigated.

- 7. The Parish Council considers that an independent study addressing all these issues should be commissioned and no permission granted unless the report demonstrates that concerns regarding noise are not well founded or can be adequately addressed by the imposition of conditions. The Parish Council also requests the local planning authority to commission a study into the possible effect of blade flicker on the large number of children at the Granta School suffering from epilepsy and not to grant permission unless the report demonstrates that the health of those children will not be put at risk.

- 8. **The proposed turbines will create an unacceptable danger to the safe movement of traffic using the A1307.**

The turbines will create fixated views for drivers travelling westbound on the A1307, particularly in the vicinity of the junction with the Horseheath Road and Bartlow Road junctions in Linton, and eastbound from the Hildersham junction to the Camgrain junction. The A1307, particularly the section between the boundary with Suffolk and the junction with the A11, is a particularly busy road with a very poor safety record; there are many hazards and high peak traffic flows. There have been 29 fatal accidents along this stretch of road during the past 12 years, including 4 in the vicinity of the Horseheath Road and Bartlow Road junctions in Linton, and 3 between the Hildersham junction and the end of dual carriageway to the east of the Camgrain junction. The Hildersham junction requires pedestrians to cross three lanes of traffic to access the westbound bus stop. In the event planning permission is granted, conditions should be imposed to ensure adequate notice of temporary road and footpath and bridleway closures and arrangements for diverted traffic along appropriate roads.

- 9. **The parish is in an area which is noted for its unusually poor television and radio reception, for reasons of local geography. Many residents already use high powered aerials to obtain adequate reception. The proposed turbines lie directly between the aerial providing television to the village, Sandy Heath, and the village. Evidence has been submitted by the applicant to demonstrate that the turbines may further degrade the quality of reception.**

The Parish Council notes the proposal of the applicant to look at providing technical assistance, including satellite services, if proved necessary. However, a significant number of houses are in the conservation area and/or are listed, so that the ability to provide satellite coverage is wholly or partly prevented by other planning controls. The Applicant refers to cable connectivity, but there is no cable connection in the village and the proposal to provide a connection was abandoned some years ago. These matters should be addressed to the satisfaction of the local planning authority before any permission is granted.

10. **The proposed turbines may have an adverse effect on the ecology and wildlife of the area in which they would be located contrary to the principles contained in Development Control Policy NE/15 of the approved Local Development Framework.**
The Council requests that planning permission will not be granted unless the local planning authority is satisfied that proper studies have been submitted or commissioned which demonstrate that any such concerns are not well founded.
11. **The proposed turbines are likely to create a hazard for air traffic flying by Visual Flight Rules to and from Duxford airfield.**
The nature and location of controlled airspace for commercial air traffic results in the use of the A1307 corridor by light air traffic working to VFR. The presence of the turbines is likely to cause a hazard to such traffic and lead to the abandonment of the normal “right hand rule” along the A1307 with adverse safety effects. The Parish Council additionally requests that permission is not granted unless the requirements of commercial and military traffic control are shown to be met.
12. **The applicants have failed to evaluate this site against alternative sites which may be available, or to demonstrate that there are no alternative sites. Alternatively, if they have evaluated this site against alternative sites, they have failed to set out why this site will cause less damage to acknowledged interests of importance than those other sites which have been considered.**
13. **If permission is granted the Parish Council would wish that suitable conditions be imposed requiring the closure and removal of the turbines and associated equipment if it becomes apparent during operation that the turbines are unable to operate without causing damage to the interests identified in paragraphs 4, 6, 7, 8 and 10 above, in addition to the normal conditions regarding its decommissioning at the end of its projected operational life.”**
70. **Little Abington Parish Council:** Refusal. Impact on health; proximity to habitation; limited evidence that there is sufficient wind to generate a significant amount of renewable energy. This outweighs the disadvantage of visual impact on the local landscape.
71. **Pampisford Parish Council:** No recommendation due to an even vote. The Parish Council acknowledges the need for renewable energy. However, the turbines are very close together and will impact on the landscape (Policy NE/4). It is near the A1307 and the animals at Linton Zoo. Concern about noise for local residents and loss of recreational amenities.
72. **Sawston Parish Council:** Refusal. Concern about the impact on the environment and the small amount of electricity that would be generated.
73. **Hinxton Parish Council:** Refusal. The location of the wind farm is inappropriate for the area and its proximity to residential buildings is of great concern.
74. **Uttlesford Parish Councils:**
75. **Great Chesterford Parish Council:** Refusal.
The size of the structures would dominate the surrounding countryside.

The closeness to dwellings of some of the turbines is well within the recommended separation distance of 1.5 km. There is insufficient evidence that being this close to dwellings would not cause health problems in noise, flicker and amplitude modulation.

76. This area is known as being an area of low wind speed by the renewable energy community. There is no evidence that there is sufficient wind resource to make these turbines efficient. There is no evidence that this site is suitable.
77. Why is it acceptable to site one of the turbines right next to a SSSI?
78. The effect on the television signal, which is already poor in this area, has not been addressed adequately.
79. There are many paths and bridleways through and close to the site. The building of the wind farm would have a detrimental effect on the enjoyment of these facilities and would be a loss of amenity.
80. **Hadstock Parish Council:** Refusal. The site is too close to human habitations on all sides. Most of the houses in Hadstock village, several of which are grade 2 listed, are within 2 km of turbines 8, 6, and 4, across open fields. The prevailing wind is from the west, and turbine 8 is due west of the village centre. There is a concern that Hadstock village could be affected by low frequency noise, or other audio phenomena, resulting from the operation of the turbines. There is also the risk of exposure throughout the parish to shadow flicker from the setting sun, from the turbines 4, 5, 6, 7, and 8.
81. The moving turbine blades would disturb the visual tranquillity of the surrounding open countryside. They would pollute the rural scene with unnatural movement, and reduce the quality of recreation on footpaths on and around the site.
82. Enertrag's Viewpoint Number 2 in Volume 2 of the ES gives a misleading picture of the visibility of the turbines from Hadstock, as seven out of the eight turbines are hidden by trees immediately in front of the camera.
83. The wind farm proposal is a large-scale development that, if approved, would dominate the landscape and set a precedent for further industrial development in rural area along the county boundary.
84. **Little Chesterford Parish Council:** Refusal. The Parish Council is in favour of renewable energy, but the positive benefits are outweighed by the following concerns:
85. Visual Impact. Wind turbines are acknowledged as the most visually intrusive of any of the renewable energy generating technologies. The size and the rotating blades attract the eye, making them much more noticeable than any static object of the same size. These turbines will become the defining objects in the landscape and as alien commercial machines will bring a completely different industrial feel to one of the few remaining areas of open countryside in a part of the country where the pressure of development is ever present. The area between the Linton and Little Chesterfield is a key amenity for residents of the parish who value it for the attractive landscape and as a chance to enjoy the countryside.
86. This is an attractive village and the impact of the turbines on the ridge will provide a visual impression alien to the historical context of the Parish. There will be an adverse effect on the setting of many of the attractive listed buildings in the parish, in particular our Church of St Mary the Virgin. There will also be intermittent views of

blades and parts of turbines as you move around the village which will be visually disconcerting and out of character.

87. **Recreation:** The well-used footpaths and bridleways that cross the site are important to many villagers. The developers have ignored the recommended minimum separation distances of the British Horse Society and have placed the turbines closer to the main bridleway. This will pose problems for those who use the bridleway.
88. **Wildlife:** There will be a displacement effect on birds and bats from the eight large turbines even if they do not inflict collision damage. This will reduce the enjoyment of the countryside for parishioners.
89. **Policy:** The proposal is contrary to policy DP/3 (Development Criteria) especially with respect to sections j, l, m, n, o, p and s.
90. **Saffron Walden Town Council:** Refusal. Strong objection on the grounds of noise, environmental hazards, the effect on wildlife, including birds, and the inappropriateness of the site given its location in one of the least windy areas and its ineffectiveness.

Neighbouring District Councils

91. **Uttlesford District Council:** Uttlesford District Council considers that the proposed development before South Cambridgeshire District Council would adversely affect interests in Uttlesford for the following reasons:
 - (a) Affect on the character of the Hadstock Conservation Area;
 - (b) Form a visual intrusion into the open rolling landscape;
 - (c) The proposal is likely to give rise to higher levels of noise than identified in the applicant's case which could be harmful to properties within 2km.
92. The following District Councils were consulted but had no comment to make upon the proposal: Bedford Borough, Braintree, Forest Heath, Huntingdon, North Hertfordshire, St Edmundsbury Borough.

Representations

Consultees (by topic)

Economic development

93. **SCDC Strategic Sustainability Officer:** Support. From the perspective of strategic sustainability, The SSO considers there to be two key issues that should be taken account of when considering the determination of the current application:
 - i.) the need and relevance of wind farm development in South Cambridgeshire;
 - ii.) the importance of securing the support and acceptance of the local community.
94. Between them, the drivers behind these issues probably encapsulate the UK's ability to successfully negotiate the current 20-30 year transition period (between centralised fossil fuel generation and centralised green energy generation) in a manner that tackles the challenges of climate change alongside delivering secure and accessible energy supplies for all.
 1. *The need and relevance for large scale wind farm development as an effective and appropriate renewable energy technology for South Cambridgeshire*

From this strategic perspective, the strength of argument (as reflected in national, regional and local policy) is overwhelmingly in favour and constructed from the following elements:

- i. The likely impacts associated with climate change are significant and include flooding, subsidence, water shortages and increased insurance associated with damage to buildings. The importance to South Cambridgeshire and the Cambridge sub-region as a whole, of which the district is an integral part, cannot be understated since much of the area lies close to sea level and already experiences some of the driest seasonal weather in the country.

South Cambridgeshire residents also have, on average, one of the highest annual per capita carbon footprint figures in the region at 10.2 tonnes of CO₂ (as calculated by DEFRA under the methodology for national performance indicator NI 186).

It is therefore appropriate that the District takes all steps available to mitigate these impacts through maximising its contribution to carbon reduction as rapidly as possible. The Linton wind farm will generate approximately 40GWh of electricity per annum (based on a 28% capacity factor) which equates to an annual saving (over generation from conventional fossil fuels) of approximately 17,200 tonnes of CO₂. To put this into perspective the residents of Linton (population approximately 4,200), for example, account for approximately 44,000 tonnes of CO₂ per annum.

- ii. South Cambridgeshire District Council is committed, as a signatory to the Nottingham Declaration, to taking steps to mitigate the effects of climate change. It is also responsible, as are the other Cambridgeshire district councils, to reduce local carbon emissions through adoption of the current Cambridgeshire Local Area Agreement. Alongside these broader strategic positions, South Cambridgeshire as the local planning authority, is specifically disposed through its planning policies to encourage the installation of renewable energy technologies within the district.
- iii. On-shore wind is currently the most available and economically viable low carbon renewable energy technology in the UK and has a significant and very relevant role to play in decentralised energy provision. Wind energy is an inexpensive, clean and reliable form of power produced in an environmentally friendly way – the turbines do not produce chemical or radioactive waste.
- iv. In response to the 2008 EU Renewable Energy Directive the UK Government has adopted a target of generating 15% of all energy from renewable sources by 2020. The current scenario for realising this target suggests that it will need to incorporate 35% of electricity generation from renewable sources. In 2008 renewables provided 5.5% of the electricity generated in the UK (of which wind made up the largest proportion at around 33%). The contribution from wind farms (on- and off-shore) is placed at around 33GW by 2020 - only approximately 3GW were operational at the end of 2008. Onshore wind generation has been specifically identified as a means of realising these targets (off-shore wind generation requires a much greater investment – the conditions for securing such investments are presently far less favourable than they were).

At the regional level, it would appear that the Eastern Region will not now meet its 820 MW 2010 target for renewable energy generation. Delivery will need to increase as the region refocuses on the 2020 target of 1620 MW (Policy ENG2 of

the East of England Plan, May 2008). Presently there are no sub-regional targets but these can be expected as part of the review of the East of England Plan that is presently under way and looking to test initial aspirational targets of 16% of electricity demand from renewable energy technologies by 2015 and 20% by 2020 (estimates for December 2008 put the installed total at 6.7% as 2,200GWh from a total consumption of 27,700 GWh). It would seem likely that new national targets will probably push these figures up further. To meet such targets, within the appropriately pressing timescales set, will almost certainly require significant contributions from the onshore wind sector.

Wind turbines provide load relief for conventional fossil fuel powered plants, enabling them to 'throttle back' and save fuel. The need for a 'back-up' conventional electricity supply to stand in when the wind is not blowing has created concern over potential carbon savings. However, National Grid has calculated that 33GW of wind would require an additional 6.5GW of reserve back-up supply – roughly the same proportion as is currently built into the grid system. It should be remembered that every kWh generated by wind is one less from fossil fuels – the issue is not relative reliability but the number of kWh delivered to the grid.

2. *The importance of securing local community support, acceptance or buy-in for the wind farm development.*

The second strategic sustainability issue relevant to this proposed development is frequently left in the shadows when it comes to the consideration of commercial wind farm planning applications. This relates to the importance of effective public engagement as society makes the transition to low-carbon living in a low-carbon economy over the next 20 to 30 years. The decentralised energy supply model (with its tenets of energy conservation, efficiency and renewable generation) will be required to increasingly support our energy needs until a centralised model of energy production can re-establish itself within the parameters of an 80% reduction in carbon emissions by 2050 (as established through the 2008 Climate Change Act).

Effective public engagement is a necessity and bedrock of this transition and all decentralisation measures (of which the Linton wind farm must be considered one) will need to ensure that they propagate support. The essential facets of the take-up and shift to low carbon lifestyles over the coming two or three decades are not geographically remote, they are local – existing at community, neighbourhood and individual levels of engagement and agency. The decentralisation transition will come about as much through our individual actions to reduce carbon emissions in our day-to-day lives as it will from a change to a locally dispersed infrastructure of non-fossil fuel based energy generation: the former arising from behaviour change and domestic level changes towards more sustainable energy management, and the latter arising from the progressive inclusion of renewable energy installations – such as the Linton wind farm proposals.

The ability and significance of these two elements supporting each other must not be missed or underestimated. If the two are effectively linked then the rate of change is far more likely to reach that required to meet the challenging targets that have been set for national, regional and local carbon reduction between now and 2050.

Proposed developments, such as the Linton wind farm, are well placed to do this by fostering community buy-in and ownership. Without this local relationship between such installations (especially the more visible ones such as large-scale

wind) and the communities around them, and for whom they will become an element of day-to-day life, they will risk:

- i. not making the most of the opportunities they bring to engage local populations actively in the benefits and positive options arising from the transition to low carbon living in a low carbon economy, and;
- ii. alienating significant numbers of the local population from this transition process. Unless active and responsive consultation is carried out alongside potential options around local community buy-in, partial ownership or some other mechanism for sharing returns from the energy output, many local residents will come to see wind farms as externally imposed and purely commercial driven impositions upon their lives and local areas.

The current wind farm application is running this 'social' risk. Within the strategic sustainability framework, social viability is as important as its technical, environmental and financial counterparts.

The Linton wind farm developers talk briefly of establishing a 'trust fund' which will "be available to the neighbouring communities and will be available for projects for local schools and community groups (Design and Access Statement, p.3) and have undertaken a "programme of public consultation".

As it currently stands, from a strategic sustainability perspective, the underdevelopment of both these strands – a responsive consultation process and a tangible financial stake for all residents (ideally one that is tied to the productivity of the wind farm) is the greatest weakness of the application. Opportunities around partial/limited local ownership (for example through share options) of one or two of the turbines are an option that could have been brought forward. Many people are anxious about climate change and energy security and would welcome the chance to have a direct stake in a new low carbon future.

SSO overall recommendation:

Support the application from a strategic sustainability perspective.

95. Request that the applicant look to address the concerns raised around community engagement – especially those relating to reviewing options for limited/partial community ownership or shareholding that would allow local residents to secure a long term stake in the productivity of the wind farm.
96. **East of England Development Agency:** EEDA supports the proposal as it helps to address some of the key themes identified in the Regional Economic Strategy, especially the aim of maximising the efficient use of resources in a growth region facing the urgent need to reduce its carbon emissions. The region is expected to fall short of its 2010 target for production of electricity from on-shore renewable sources and has an ambitious 2020 target. EEDA therefore regards this application to be of strategic significance by reason of its potential contribution towards national and regional targets. Relatively few opportunities exist in the East of England for wind farms as the region is constrained by many factors. This makes those that are brought forward, such as this, of particular importance.
97. The RES, "Inventing Our Future- Collective action for a sustainable economy" was published in Autumn 2008. A key target is the need to address climate change,

reduce CO2 emissions (60% reduction target by 2031), and undergo transition to a low-carbon economy (p 43-4). The East of England is the leading region for renewable energy capacity (p64) and the RES commits to maximise its potential especially in the wind, biorenewables and on-site renewables arenas. EEDA initiated the establishment of Renewables East as an arms length agency to press forward that agenda.

99. EEDA is committed to the delivery of the regional renewable electricity production target set down in the East of England Plan (published May 2008). The regional target (Policy ENG2) requires the generation of 10% of the region's electricity from onshore renewable sources by 2010 (expressed as 820MW of installed capacity), and 17% by 2020 (i.e. 1620MW). Offshore wind is excluded. There are no technology-specific targets or area-based targets.

	MW of Installed capacity
On-shore wind projects built	128
On-shore wind projects approved	38
Biomass projects built	113
Landfill gas built	184
Sewage gas built	4
Total- assuming all wind projects approved are built.	467 (i.e. 57% of the target)

100. At December 2008 there were 273MW worth of wind projects in the planning system (including at appeal or Judicial Review), but, irrespective of those which will be withdrawn or refused, few if any of these can realistically achieve completion by the end of 2010. So the region is likely to achieve somewhere between 52% and 65% of its 2010 target in terms of MW. There is now a need to focus on the challenging 2020 target. Wind is the fastest growing and most mature technology. Both the region and the nation are falling short of their renewable energy targets so it is important that every scheme is sound enough to comply with planning policy receives consent.
101. EEDA has noted that the project is a form of agricultural diversification, that there may be some local employment generated during the construction phase, and that tourism is not expected to be adversely affected. EEDA would urge that planning permission be granted.

Cultural heritage

102. **Council's Conservation Officer:** Objection. Linton Wind Farm is within the settings of Conservation Areas and Listed buildings primarily within South Cambridgeshire, Uttlesford and Braintree, although other areas will have more distant views, generally as shown on the submitted Impact Zone maps.
103. The submission has not sufficiently shown consideration of the Conservation Areas and Listed Buildings. The map showing the majority of Listed buildings (those Listed Grade II) is omitted from the main documentation and only found in an appendix. The impact study for Grade II Listed buildings is again in an appendix rather than with the Grade II* and Grade I buildings in the main documentation. The table describes groups of buildings together even where the impact varies, and therefore the result fails to identify individual buildings where the impact is greater. Some comments are evidently not based in visits to the site where the conditions in reality are not as insignificant as predicted. The impact of the wind farm has been seriously underestimated in the submitted ES report.

Conservation areas

104. The Conservation Areas most affected are Linton, Great & Little Abington, Hildersham, Hadstock, and Great Chesterford. The latter are within Uttlesford. Further Conservation Areas such as Hinxton, Pampisford, Babraham, Bartlow and Little Chesterford are within 5 km of the wind farm and further Conservations Areas such as Littlebury, Sawston and Shudy Camps, which are further, have specific views and conditions that will be affected by the proposed wind farm to some extent, but not as greatly as the above.
105. The Conservation Areas comprise the major part of these historic villages. They are a complementary group of settlements set within a landscape of woodland and rolling agricultural hills. Close to the villages the landscape is more small-scale and interspersed with small areas of woodland. This intimate character is more easily harmed by large development. The Conservation Areas are closely related to the landscape beyond; linked together with footpaths and the Icknield Way; and a significant part of the character of the Conservation Areas comprises the views into and from the villages.
106. The wind farm would be an alien tall industrial feature in this countryside, with a scale that is incompatible with the modest rural scale and character of its surroundings.

Linton Conservation Area

107. The proposed wind farm is closest to the Conservation Area in Linton and the nearest part of Linton Conservation Area is 1 km away from the nearest turbine. Linton is designated as the only Outstanding Conservation Area in South Cambridgeshire, due to the high quality of the historic environment within the village. Historically it was the most important market town in the County after Cambridge. It therefore contains many prosperous town houses and has more Listed buildings than any other settlement in the District, with around 130 listed buildings. The quality of the land surrounding the Conservation Area and village is high, especially where unaffected by the A1307, and the character is very rural.
108. This rural setting is an important part of the village and Conservation Area, with many views in and out of the countryside, and part of the Conservation Area comprises the fields to the south of the village centre.
109. Some of the most significant views of the relationship of the proposed wind farm with the Linton Conservation Area are from the Icknield Way above the village near the Water Tower. Part of this is shown on photomontage Viewpoint 11, but this illustration omits most of the village and all of the Conservation Area. In this view the wind farm is seen immediately to the west (right) of the village and Conservation Area, and dominates the landscape and scale of the buildings.
110. Although views are unlikely to be obtained from the southern part of Conservation Area around The Grip where the wind farm is obscured by trees and the mound of the disused railway line, the turbines will be clearly seen from much of the High Street, and from many of the lanes leading from this to the South. In these views the Grain Store is out of sight so the wind farm will dominate the scene.
111. The major part of the Conservation Area, the village itself, is focussed around two buildings, the Listed Church and the High Street around the Listed Dog and Duck Public House. The applicants did not supply the requested views within Linton Conservation Area to show the Church and adjacent Listed Guildhall, but they are likely to be affected by isolated views of the blades in close proximity. The wind farm is significantly more evident along the High Street as the northern turbine is aligned with

part of the High Street and would be the dominant focus of views along most of it. View SLWF photo 19 along the upper part of the High Street shows the blimp very slightly to the right of the proposed northern turbine at this point. Slightly lower down the High Street, the photo shows the curve of the High Street to the left where the turbine aligns with the major view between houses. These views would conclude with the wind farm as a backdrop to the Dog and Duck PH and the adjoining Listed houses. At this lowest part of the High Street the full height of the northern turbine would be seen above the houses next to the Dog and Duck PH, along with the adjacent turbines. The buildings in this part of the Conservation Area are amongst the most modest in the village and the turbine will be at least one-and-a-half times their height above them. The SLWF photo 17 is taken lower than the view of the greatest impact and the turbines would be spread out on the skyline to the left of the blimp.

112. Views of the wind farm will also be from Church Lane, Mill Lane, Green Lane, Market Lane and Horn Lane, and the meadows to the South of the village, within the Conservation Area. SLWF photo 10 shows the view from Church Lane where the turbines would be spread across the skyline to left and right of the blimp.

113. **Conclusion:**

The special interest of the Conservation Area in Linton and its rural setting would be significantly harmed by the proposed wind farm. The impact would be of a high magnitude due to the close proximity, orientation of the High Street and the dominance of important views and buildings. Major Adverse impact.

Great and Little Abington Conservation Area

114. The Conservation Area of Great and Little Abington is 2 km from the nearest turbine. The Conservation Area is centred on the High Street and the meadow around the Listed Great Abington Church. The High Street is enclosed by trees to the east although turbine blades will be higher than most of these trees. From the easternmost belt of houses, and from the open meadowland around the Church, the wind farm including most of the height of turbines will be seen. This will include views as a backdrop to the houses at the entrance to the church path, including some Listed buildings. When viewed from the land around Little Abington church, the wind farm can be seen as a backdrop to Great Abington Church. When viewed from the open parkland between Abington Hall and Little Abington Church, the turbines would be visible between them and would disturb their strong historic relationship. SLWF photo 61 from the porch of Abington Church gives an idea of the height the turbines will be when viewed across the meadow and along the High Street.

115. **Conclusion:**

The Conservation Area of Great and Little Abington would be harmed by the wind farm. The greatest impact and harm would be on the area around the Churches and the open space around them. Major Adverse impact.

Hildersham Conservation Area

116. The Conservation Area of Hildersham is 1.2 km from the nearest turbine. It is primarily set into a valley but some of the High Street follows the direction of the wind farm, making the turbines more prominent. The blades will be visible from the southern end of the Conservation Area and from the higher ground to the north and east more of the turbines will be seen. The wind farm will also be visible from the group around the Church and Manor Farm, where the buildings face open ground towards the direction of the wind farm, and in conjunction and in competition with the tower of the Church in longer views.

117. **Conclusion:**

The proposed wind farm will harm the rural character and special interest of the Conservation Area in Hildersham due to the proximity of the turbines. The greatest impact and harm will be around the Church and the south western part of the Conservation Area. Moderate Adverse impact.

Uttlesford Conservation Areas:

118. These will be commented on separately but the Conservation Areas of Great Chesterford and Hadstock in Uttlesford, as well as possibly Littlebury, would be significantly harmed by the proposal. The village of Hadstock is in close proximity to the proposed wind farm and is 1.8 km from the nearest turbine. It comprises many Listed buildings and is on the edge of a hillside facing towards the wind farm. The illustration supplied by the applicants is not indicative of the centre of the village and around the Listed Church where the turbines would dominate and be the focus of views of the countryside. Likewise the SLWF photos do not show worst case positions and neither of the reports considers the prominence of the turbines in the only long views from the group of buildings around and including the Grade I Listed church. At Great Chesterford and Littlebury the wind farm will be visible from part of the village and the turbines will compete with the Church tower (see SLWF photo 68). Subject to comments from Uttlesford DC, it is likely that the impact would be Major Adverse for Hadstock Conservation Area and Moderate Adverse for Great Chesterford & Littlebury Conservation Areas.

Listed Buildings

119. The group of seven Listed buildings called Chapel Terrace, numbers 53 – 61 High Street, Linton are Listed Grade II. They are 1.5 km away from the nearest turbine. The most prominent views of the buildings would have the turbines directly behind them. Because the ground rises behind the buildings, one turbine is sited with its base level with the ridge of number 61, so would be visible for its entire height above the cottage. Because of perspective, the turbine will appear to be one-and-a-half-times as high as the cottages so will dominate them. Major Adverse impact.
120. The buildings along the High Street directly above and below Chapel Terrace are 1.5 – 1.7 km away from the nearest turbine, and would have the turbines as a focal point in their settings. They include The Dog and Duck Public House, The Swan Inn, numbers 45, 71, 75, 77, 79 and 81 High Street and Linton House. Views of these buildings will include at least one turbine appearing at a similar height to that at Chapel Cottages. Major Adverse impact.
121. The buildings along Church Lane are 1.6 km away from the nearest turbine and would have a backdrop of the wind farm. Linton House is the most prominent of these and the turbines behind the outbuildings attached to Linton House are aligned with part of Church Lane so would be a focal point. At this position, the turbines would be spread across the skyline to left and right of SLWF photo 10. Moderate Adverse impact.
122. The buildings along Green Lane are 1.8 km away from the nearest turbine and would have a backdrop of the wind farm. The most prominent view would be at the front of the Manor House, 14 Green Lane, which is Listed Grade II. It is positioned at 90 degrees to the road so would have the wind farm as a focal point of the view of the front of the house. Moderate Adverse impact.
123. Great Abington Church is Listed Grade II* and is 2 km away from the nearest turbine. The church tower is the focus of the settlement and the turbines would be double the height of the church tower, in a row directly behind it. The turbines would harm the

setting of the church by attracting the attention in views and competing with the church tower. Major Adverse impact.

124. Little Abington Church is Listed Grade II* and is 2.6 km from the nearest turbine. It has long views over open space towards the wind farm. This view incorporates Great Abington Church as well. The importance of the setting and this view is enhanced by the relationship of the two churches, the spaces around them, and the surrounding open countryside. The effect of the harm would be increased by the importance of the two churches and their joint setting. Major Adverse impact.
125. The buildings along the High Street, Great Abington are 1.9 – 2.2 km away from the nearest turbine and where the trees are lower, whole turbines are likely to be seen. One of the most prominent positions where a whole turbine would be seen would be as a backdrop to Gildencroft, a Grade II * listed house. Moderate Adverse impact. Abington Hall is Listed Grade II* and 2.5 km from the nearest turbine. It has modern development on the west and south, so the only remaining original parkland and landscape to the north east is of high significance. The rarity of the parkland, views in conjunction with the major garden elevation, and style of the house where parkland is part of the composition, increase the impact of the blades visible in this setting despite this being further from the wind farm. Therefore, contrary to the submitted ES analysis, the impact based on Table 8.4 criteria would be Major Adverse.
126. The group of buildings at Little Linton, especially 'Barn to W of Little Linton Farmhouse' and '2 Barns to E of Little Linton Farmhouse', both Listed grade II. These are only 1.2 km away from the nearest turbine and the views are similar to those shown on figure 7.21 with at least 7 of the turbines in view. The farm buildings currently have a rural setting (the grain store is almost entirely hidden behind trees) and this would be harmed and dominated by the turbines which have a much larger scale and are industrial in character. Major Adverse impact.
127. The Kyles & The Boundaries, Long Lane, Linton, both Listed Grade II are 2 km away from the nearest turbine. On the approach along Long Lane, they are seen with a backdrop of the wind farm on the skyline. These houses are situated along a rural Lane surrounded by small fields which would be dominated by the turbines in close proximity. Moderate Adverse impact.
128. Barham Hall is Listed Grade II* and is 3 km away from the wind farm. When looking westwards past Barham Hall over its grounds the turbines will be visible in a row, behind the Mill on Long Lane. SLWF photo 20 shows a blimp in this direction. The turbines will appear higher than the Listed building and harm its setting within open countryside. Moderate Adverse impact.
129. Linton Village College and headmaster's house, Linton. These are some of the closest buildings to the proposed wind farm and are 1.5 km from the nearest turbine. The setting is not rural but the turbines are so close and large that they will significantly harm the interests of the Listed buildings when viewed from a distance such as from Rivey Hill. (see SLWF66). Moderate Adverse impact.
130. Symonds House, Linton is Listed Grade II and was previously the Union Workhouse and Hospital. It is 1.5 km away situated within housing on the side of a hill looking over the countryside towards the proposed wind farm. The blades and some of the shaft would be visible above the rooftops and the turbines would be visible in conjunction with the Listed building when viewed from Rivey Hill. Moderate Adverse impact.

131. The application has failed to provide sufficient information as requested to consider the impact on the numerous historic Listed windmills in the vicinity. The two closest windmills are both Listed Grade II. Four Winds is 1 km away from the nearest turbine and The Mill at Linton is 2.5 km away. When viewed from Barham Hall across open countryside the Mill on Long Lane is visible in the foreground to the wind farm (see SLWF photo 20 where the turbines would be spread to left and right of the blimp). From that direction, the wind farm will appear more than twice the height of the Mill. Both mills are only 10 or 12 metres high whereas the turbines are ten times that. Whilst there is a historic link, the scale of the turbines is in competition with the existing Mills and their uninterrupted skyline. Moderate Adverse impact.
132. Hildersham Church is listed Grade I and is 1.9 km away from the nearest turbine. The turbines would be visible in the same direction as Four Winds and the turbines will be visible in conjunction with the church tower at Little Abington, where they will be considerably higher than the church tower. SLWF photos 2 and 4 give an idea of the impact although in both views three turbines will be to the east (left) of the blimp, making the turbines more prominent above the lower trees. Major Adverse impact.
134. Manor House, Hildersham is Listed Grade II* and is 1.8 km from the nearest turbine. Although heavily landscaped within the immediate curtilage, there would be views of the turbines in conjunction with the house and modest outbuildings. Moderate Adverse impact.
135. Hildersham Hall is Listed Grade II* and is 1.4 km from the nearest turbine. The setting is enclosed by trees but the blades would be visible through and over trees due to the proximity to the wind farm. Moderate Adverse impact.
136. Mill House, Hildersham is 1.3 km away and Listed Grade II. Although set low in the landscape, the turbines would be higher in views southwards on the entrance to the group. SLWF photo 6 gives an idea of the effect. Moderate Adverse impact.
137. South Lodge, Hildersham. This is 1 km away from the wind farm, but screened to some extent by rising ground. The blades would be seen in close proximity in conjunction with the Lodge on the approach from the Abingtons. Moderate Adverse impact.
138. **Conclusion**
The list above is a selection of the Listed buildings affected by the wind farm. The settings of a number of Listed buildings will be harmed by the proposed wind farm. The worst affected would be Chapel Terrace, buildings adjacent to Chapel Terrace on the High Street in Linton, Little Linton, Great and Little Abington Churches, Abington Hall and Hildersham Church.

Uttlesford Listed Buildings:

139. These will be commented upon separately, but the worst affected Listed buildings would include the village centre of Hadstock including the Grade I Listed church, (of national significance) which would look out onto the wind farm; and Great Chesterford including the church (also Listed Grade I) which would have a backdrop of turbines competing with and appearing higher than the church tower.
140. There are Listed buildings and Conservation Areas further away than the above that would be affected by the wind farm. For instance, Photo 21a shows the Grade II Listed Street Farmhouse (7 km from the nearest turbine) in the foreground of the Shudy Camps Conservation Area with the turbines prominent on the skyline. Due to the height of the turbines even with perspective at this distance, the turbines appear

at least as tall as the Listed house and out of scale with any of the buildings, so there would be a Moderate Adverse impact.

141. In conclusion, the proposal for a wind farm at Linton would significantly harm a number of Listed buildings and Conservation Areas by means of its location, competition, size, height, bulk, industrial appearance, visual disturbance and character. The submission significantly underestimates the effect of the proposed wind farm and also fails to include any investigation of less harmful alternatives and any mitigation for the harm. The proposal therefore will not comply with CH/4 and CH/5; or the relevant policies and guidance in PPG15, PPS22, or the relevant English Heritage guidance. The Conservation Officer recommends refusal of the application.
142. **English Heritage:** No comment. The application should be determined in accordance with national and local policy guidance, and on the basis of the Council's conservation advice.
143. **Cambridgeshire County Council Archaeology:** The Environmental Statement proposes an archaeological watching brief to be carried out during construction of the access road. This is inadequate and should be replaced with a targeted and contained archaeological investigation prior to the construction of the access roads. This should be the subject of a planning condition in the event of an approval of planning permission.

Public Rights of Way

144. **Cambridgeshire County Council (Office of Environment and Community Services and Countryside Access Team):** Objection to the proximity of the turbines to Linton Public Bridleway No. 7 and Public Footpath No.11. The proposed location of the T6 is approximately 80 m away from Linton Bridleway No.7; T4 has 110 m separation distance from Bridleway 7; T2 is 180 m away. These do not conform to the current policy of The British Horse Society which states that there should be a separation distance from public rights of way of three times the overall height of the turbine. For the currently proposed turbines this would amount to 375 m. The proposal does not comply with Policy T9 of the East of England Plan, which seeks to improve access to the countryside and recreational opportunities.
145. The County Council's Countryside Access Team has concerns about the use of Linton Public Bridleway No.7 as the access route for construction and maintenance of the wind farm. Damage to the surface of a public footpath or bridleway is an offence.
146. **The Ramblers Association (Cambridge Group)** Objection. The RA is concerned at proximity of turbines to Rights of Way. The RA understands that the distance of some turbines is less than that recommended. Falling ice could be a real danger. It is concerned about the impact on the landscape in the immediate vicinity in an area of designated landscape value. The turbines will be seen from more distant ridges and paths, even as far away as Elmdon. It is concerned about the disruption to the path network during the construction of the turbines and service roads. It is concerned about the short and long term impact on the wildlife and fauna of the area. Hildersham Wood is a SSSI and some of the turbines are surprisingly close to the wood.
147. **Shelford and District Bridleways Group:** Objection. The proposal does not conform to the guidance of the British Horse Society that turbines should be placed at a minimum distance of three times their height from any bridleway. For the current scheme this represents a distance of 375 m. T2, T4 and T6 (and T8 in Uttlesford District) are well within this zone. Horses may be disturbed by the sudden appearance

of turning blades, by low frequency noise, by shadow flicker, and the unexpected starting up of the turbine as the horse approaches. A second concern is that, during the construction period, encounters between construction traffic and horses are likely to result, which could be dangerous for the horse and rider. Construction traffic should be provided with a separate access, whereas the submitted proposal is to temporarily close or divert the bridleway route. Heavy traffic using the bridleway is likely to result in this being left muddy, boggy and uneven. If these measures cannot be achieved, or the turbines relocated appropriately, the route of a new bridleway should be agreed and be in place prior to any construction work beginning.

Landscape

148. **Council's Landscape Design Officer:** Objection. The Landscape Design Officer advises that the site forms part of the East Anglian Chalk Landscape Character area. This is a broad scale landscape of large fields, low mechanically trimmed hedges and few trees. The eastern part of this area has a number of woodlands and shelterbelts which help to break up along distant views and give some form and character. The complex history of settlement and the impact of people on the landscape over the centuries are particularly apparent in this part of the county.

The site

149. The site is elevated, with the lowest turbine (T2) being set at approximately 65m AOD, and the highest (T7) at approximately 107m AOD. This is in contrast to the local settlements of the Granta Valley which are mostly contained below the 50m AOD contour. The site is located at the edge of a noticeable escarpment, running north-east to south-west, affording long views to the north-west to The Gog Magog Hills and the wide Cam Valley and the Fens beyond. To the east and west there are views towards the high land at the Great Chishill and Balsham areas. Given the elevated position and open nature of the landscape, long views are also possible back into the side from a wide area, whether from the valley bottoms to the north and west, or from the surrounding hills to the south west and east.
150. Linton and the adjacent landscape has no specific landscape designation or protection. However, these can be seen as distinctive due to the position of Linton in a relatively narrow, intimate river valley with steep slopes and Rivey Hill beyond, and the wide distant views from the Icknield Way. Taken as a whole with the historical significance of the village buildings as a group, and the generally small scale of buildings and streets, this landscape is locally very significant.
151. The ES notes (para 7.5.5 page 119) the existing presence of detracting influences (Camgrain, busy roads, pylons) and suggests that these features reduce the local landscape sensitivity to Medium- Low. However, the local landform means that to the north, Camgrain does not break the skyline and to the south, folds in the land form means that buildings, the roads and even some of the pylons are intermittent features in the landscape. This would not be the case with the proposed turbines, the scale of which would mean that they were an ever present feature. The scale of the development, and the relative impact of Camgrain and the A1307, is shown in Figure 7.31 Viewpoint 11. This illustrates that Linton would be completely dominated by the development.
152. At para 7.9.4, the ES notes the presence of agricultural buildings and pylons and suggests that the turbines will be just another element within a busy landscape. Agricultural buildings are an inherent element of the farmed landscape, are horizontal in form, and can usually be absorbed into the landscape. The scale of the proposed development will introduce vertical, moving elements into the landscape of a far greater stature than even the existing pylons.

153. The ES again reduces the landscape sensitivity of the area to Medium-Low at para 7.8.3 page 133, because of the presence of detracting influences, and suggests that the effects of the development will be reduced due to the "natural barriers" of Linton and Hildersham. The LDO advises that, due to the landform elevation, and the scale of the development, this will not be the case.
154. Many public rights of way exist in the landscape close to the site. Many of these pass through some of the most tranquil areas of the district. Long views are possible to the site over wide areas. In some areas the turbines will remain in view for long periods of time to the traveller, for example south of Hadstock from viewpoints 6 and 9 (Figures 7.26 and 7.29) from both roads and footpaths.

Cumulative effects with Wadlow wind farm

155. The proposed wind farm at Wadlow lies approximately 7 km north of the site. If allowed, this would be a very significant feature in the landscape. Cumulative viewpoints have been provided by the applicant (particularly figures 7.33, 7.34, 7.36, 7.37, 7.38 and 7.41), but the Landscape Design Officer advises that these do not demonstrate the combined effects of the developments on the landscape. Both are situated at similar elevations and they would have views to each other across the Granta Valley. The area between the developments, including sections of the Hamcarlow Way, is currently largely a tranquil landscape in which it is possible to escape the effects of the major transport routes. This would not be the case with the cumulative scale of the wind farm developments, if approved/allowed.
156. The Landscape Design Officer recommends refusal of the application due to 1) the overbearing scale of the development, particularly in relation to Linton, and the distinctive smaller-scale landscape surrounding the village; 2) the effects of the development over wide areas of the tranquil chalk landscape and associated public rights of way, including the cumulative effects with Wadlow wind farm; 3) the lack of detail relating to alternative layouts and possible landscape mitigation measures.
157. **Cambridge Preservation Society:** Objection. The Society is not against wind farms in principle and overall welcomes moves to facilitate more sustainable living and working and achieving higher sustainability in relation to the expanding needs of this Sub-region. However the Society has identified issues which it considers require addressing in relation to the designated nearby Green Belt, the special local natural and historical areas surrounding the site and their setting and views. In particular, the proposals have to consider the adverse effect on the setting of the nearby designated Green Belt:
- (a) Adverse to the setting of the adjacent long-distance recreational and historic route – the Icknield Way;
 - (b) Adverse impact on the setting of the immediate quality landscape both in relation to scale and overall height of turbines and in relation to nearby conservation areas and listed buildings.
 - (c) Adverse to the setting of the villages of Hadstock and Linton;
 - (d) Adverse effect due to the scale of the proposed wind farm to views south from the Gog Magog Hills – i.e. major recreational areas and strategic open space of Wandlebury Country Park and the Magog Down – and also the setting of both their Ancient Scheduled Monuments and County Wildlife Sites;

- (e) Adverse impact on the setting of the nearby Cambridge Green Belt.
 - (f) Adverse effect on the Nature Enhancement Areas designated on/around the Gog Magog Hills – in particular to the south of these hills.
 - (g) Poor quality design. The proposals seem to follow limited field
 - (h) Pattern/landownership rather than high quality design and quality integration into the local landscape – such is profoundly missing.
 - (i) Lack of a detailed and up to date Landscape Character Assessment of the whole South Cambridgeshire district (as usually prepared by a Local Planning Authority). There is a lack of valuation of local landscapes, their quality and capacity to integrate small or large changes, as well as a lack of identification and protection of potential sensitive and high-quality landscapes. The Society disagrees with the overall Visual Impact Assessment as made by the applicant, as such large scale wind turbines would have a significant impact on this local landscape, as well as further afield.
 - (j) Cost benefit of wind turbines is unclear and should be demonstrated, particularly with an inland location with relatively low wind speeds in the UK.
158. **Campaign to Protect Rural England (Cambridgeshire):** Objection. Because the site is on elevated ground, one or more turbines at a time will be seen from many viewpoints, particularly by Linton residents. The developers state that because of existing man-made features adjacent to the site, it is capable of accommodating the development; however CPRE considers that these features are a reason for not adding more. Wind turbines would have an urbanising effect on this rural landscape. The area in and surrounding the site presents a scene of undulating agricultural fields and copses. On the Great Chesterford approach there is a sense of remoteness from cities and towns and busy motorways. This would be spoilt by the turbines which introduce an alien and intrusive feature into this lovely countryside. It is a countryside beloved by walkers and horse riders who are well served by a network of paths and bridleways.
159. The Regional Spatial Strategy Review indicates that Cambridgeshire will be expected to accommodate many new homes in the next 20 years or so. The consequent increase in population will mean increasing pressure on rural areas from people wishing to enjoy a few hours or a day in the countryside, by walking, cycling, and horse riding. CPRE favours the use of renewable energy, but looks at all applications on their merits to see whether the benefits outweighed the effect on the landscape. CPRE feel that this application does not demonstrate sufficient benefits and should be rejected.
- Environmental impacts**
160. **Council's Health and Environmental Services:** Objection. Health and Environmental Services (HES) have identified the main relevant environmental health issues associated with this application to be the impact of noise and shadow flicker. These have been considered in Sections 11 and 12 respectively of the submitted Environment Statement.
161. PPS 22: Renewable Energy states that the 1997 report by 97 “**The Assessment and Rating of Noise from Wind Farms**” ETSU-R-97 (ETSU) for the Department of Trade and Industry should be used to assess and rate noise from wind energy development. The relevance of ETSU has been discussed at numerous wind farm

planning appeals and at three recent appeals inspectors have acknowledged that there are inherent problems with certain aspects of ETSU in assessing noise impact.

162. In the light of these recent appeals and due to the increasing technical nature of noise associated with wind farms, Health & Environmental Services are in the process of appointing an independent acoustic consultant to undertake a detailed review of the noise issues associated with this application and submitted ES having regard to the above appeal decisions, national policy and relevant noise guidance such as ETSU. However, in the absence of such a comprehensive independent review, serious concerns about the findings and conclusions of the noise impact assessment in the ES remain. A number of noise issues require further consideration, clarification and or justification and additional background noise monitoring and anemometric data / information is required to allow an informed assessment of significant impacts and material considerations to be reached.
163. In the absence of this additional information it is not possible to fully consider the merits of the application and to fully assess the impact of the proposed development and the application should be refused.
164. It is considered that the additional noise monitoring and anemometric data are substantive and could be considered under regulation 19 additional information under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.

Assessment of existing noise environment / locations

165. Obtaining accurate and representative background noise measurements is paramount as they underpin the methodology of ETSU to minimise the impact of noise. They are used to determine noise acceptability of noise emissions in planning policy and in any significance of effect assessment as part of the environmental statement. They are fundamental to meet the tests in the wording of any planning conditions that may include operational controls / mitigation and any post installation compliance monitoring.
166. The ES states that a noise survey to determine the existing noise environment was undertaken by noise monitoring at the seven measurement locations neighbouring the proposed site in accordance with the guidance within ETSU-R-97. The Noise Survey
167. Methodology and the Noise Survey Measurement Locations are detailed in 11.5.1 and 11.5.2 respectively.
168. Measurement locations were selected on the basis of noise predictions based on their location relative to the proposed wind turbines. The locations of these dwellings suggested these properties would be the most sensitive, or in some cases would be representative of prevailing background noise conditions at other dwellings surrounding the proposed wind farm.
169. Table 1, below summarises the locations where and dates when noise monitoring were undertaken.

Table 1: Background Monitoring Locations / Time Periods

Background Monitoring Locations	Monitoring Dates	
	Winter	Summer
Little Linton House	23 rd October 2007 to the 13 th November 2007	28 th May 2008 to the 18 th June 2008

15 Chalky Road	23 rd October 2007 to the 13 th November 2007	28 th May 2008 to the 18 th June 2008
Abington Park Farm	23 rd October 2007 to the 13 th November 2007	28 th May 2008 to the 18 th June 2008
Linton Zoo	23 rd October 2007 to the 13 th November 2007	Not Undertaken
Pen Farm	23 rd October 2007 to the 13 th November 2007	28 th May 2008 to the 18 th June 2008
Crave Hall	13 th November 2007 to the 3 rd December 2007	Not Undertaken
Windpump Cottage	3 rd December 2007 to the 20 th December 2007	28 th May 2008 to the 18 th June 2008

170. The monitoring locations are in general accordance with the principles of ETSU that require that the existing noise environment at potential receiver locations (in the vicinity of a proposed wind farm site) must be adequately determined for a representative range of conditions.
171. However, having viewed the photographs in Appendix I.2 of the equipment setup with the residence in the field of view there is some concern about the actual monitoring positions at some of the measurement locations.
172. To date it has not been possible to visit each monitoring location to assess the actual location of microphone positions in terms of acceptability. HES intend to visit the various locations and the intention is to report any serious concerns at a future date.
173. Of greater concern is the fact that at two of the monitoring locations, namely Linton Zoo and Grave Hall no summer time monitoring was undertaken. Summer monitoring is a crucial time of the year when noise from the proposed turbines are likely to have greatest impact when residents are more likely to sleep with windows open for rapid ventilation. In addition acoustic effects such as wind shear and amplitude modulation are more likely to have greater influence at this time of year, when stable (non-neutral) metrological conditions are more prevalent.
174. It is EHS view that this is a departure from ETSU and it is recommended that summer monitoring is undertaken and noise impact is assessed before this application is determined.
175. It is also recommended that identified noise sensitive premises / relevant receivers where noise monitoring / measurements are not taken need to be characterised for their likely type of background environment and linked or justified with reference to receptors where noise monitoring is undertaken. There should therefore be a distinction between locations where background noise monitoring is actually undertaken and those additional relevant receiver locations where noise impact should be assessed as part of a modelling task.
176. Any residential premises within at least 1 to 1.5km of the nearest turbine of the proposed wind farm array should be identified as a potential relevant receiver where noise impact from the wind turbine should be considered. An estimation of the number of properties within a distance of up to 1km should be included. Although separation distance is not a decisive factor in assessing acceptability in terms of policy or noise criterion it provides a broad context setting for consideration of the extent of amenity impacts.

Noise Survey Measurement Results (para 11.5.3) / **Results of Regression Analysis** (para 11.5.4)

177. Appendix I.3 details the time histories of all the measured data that has been collected at the seven measurement locations when meteorological data was recorded. Appendix I.4 details the regression analysis performed for each measurement location for the Amenity Hours and Night-time period.
178. Obtaining and interpreting background noise measurement is not straightforward. There is some concern about the noise measurements at various wind speeds at certain monitoring locations, having regard to noise traffic from the A1307 and the Grain Stores to the north of the site. Whilst the appendices provide a representation of wind data etc it is not possible to undertake a comprehensive review and interpretation without the raw measurement data. The actual raw data used in the assessment such as wind speed / direction at relative heights at anemometric location, gust details and synchronized noise monitoring data should be submitted in a useable electronic format.

Wind Speed Data & Direction

179. In the appendices various figures graphically show the range of wind speed occurred during monitoring and the graphs of wind directions. Whilst these provide a representation of wind data etc it is not possible to readily analyse / interpret and validate conclusions without the actual raw data that has been collected. Recent research has shown that some sites may show variations in the vertical wind profile / shear between night and day, most likely attributable to greater atmospheric stability (non neutral conditions) at night. This may result in errors in the assumed turbine sound power level versus wind speed for varying conditions on site. It is important that the inherent wind profile at the site is defined correctly to sound power generated and to have confidence in the noise prediction to noise sensitive premises.
180. The ES has attempted to assess wind shear in 11.5.3. However, the calculation method used to convert higher height wind data to the equivalent at 10 m agl, when using site specific wind profile data, has not been detailed. Many researchers, since the publication of ETSU in 1996, have found that wind shear varies throughout the day and season. Considerable research has also shown that the effects of wind shear in stable atmospheric conditions, particularly at night, can result in a substantial underestimation of the turbine sound levels. In stable meteorological conditions, which often occur at night, the use of the standard formula recommended in ETSU underestimates the wind shear and therefore the noise generated by the turbines. The wind shear gradient calculation method used should be confirmed with a sample calculation and justification for use.
190. Another related concern is the fact that the monitored noise background noise levels are averaged over all wind directions. Wind direction is important as it can influence the gathering of representative background noise levels. This is likely to underestimate existing prevalent background noise levels at receptors whilst underestimating the true impact of predicted noise.
191. To undertake a comprehensive assessment of the influence of wind shear and wind direction the actual raw data used such as wind speed / direction at relative heights at anemometric location, gust details and synchronized noise monitoring data should be submitted in a useable electronic format to enable statistical analysis.

Prediction of Wind Turbine Noise Levels (para 11.6)

192. There is concern about the actual sound power levels used with in the applicant's model and it is recommended that the applicant clarifies these discrepancies in the ES and confirms the actual sound power levels used as inputs.

193. 11.6.1 of the ES also states that no allowance has been made for the character of noise emitted by the wind turbines but no justification is given for doing so.
194. It is recommended that manufacturer sound power guarantees and spectral noise tests for the Vestas V90 2MW turbine undertaken (referenced as documents 12 and 13 on page 260) are submitted for consideration.

Ground Effect (para 11.6.5)

195. It is stated that predictions have been carried out using a source height corresponding to the uppermost tip height of the proposed turbine, a receiver height of 4m and an assumed ground factor $G = 0$. This ground factor corresponds to a hard ground condition between the source and receiver and represents a worst-case situation. ISO 9613-2 (1996)1, 2 provides two methods for calculating ground effect namely spectral ground attenuation and non-spectral. The applicant should confirm which method was used for this component and justification for use.
196. It is generally accepted that ISO 9613-2 is only valid for moderate night time inversions with downwind conditions with a valid range of wind speeds of 1 to 5 m/s at 3 to 11 m high. This is effectively a light wind in neutral atmospheric conditions even though the greatest noise propagation of noise can occur under stable atmospheric conditions which may underestimate predicted noise levels at noise sensitive premises. The ES does not mention such a limitation and no commentary has been provided on how this has been considered in the noise predictions to ensure accurate noise predictions.
197. Based on the shortcomings detailed the predictions cannot be considered sufficiently robust to allow an informed assessment.

Additional issues requiring further consideration / information:

Microphone windshield effects / issues

198. Such windshield effects require careful consideration and this is reflected in paragraph of ETSU-R-97 which states:
"There is a risk that measured noise levels can become contaminated by the effect of wind noise on the microphone when using the wind shields available commercially."
199. The ES has not considered this windshield effect and the type of microphone windshield used during monitoring has not been detailed.
200. Further information is required on this matter and the details of and the wind tunnel tests on the microphone windshields used for the background noise measurements should be submitted for consideration

Amplitude Modulation (AM)

201. Wind turbine noise is not a steady sound and can include an aerodynamic noise known as amplitude modulation (AM) in the form a constant beat or swish which occurs at the same rate as the turbine blades rotate.
202. At the time of the preparation and publication of ETSU-R-97 the phenomenon of amplitude modulation was acknowledged but the understanding of its potential effect on the prediction of noise from wind turbines in the UK was limited.
204. The ETSU report does identify a potential for AM in the order of 3dBA meaning that the noise level increase and decrease by 3 dBA with every rotation of the turbine blade. However ETSU specifically excludes applying any penalty for the character of AM noise.

205. Recently greater consideration has been given to AM and significantly following the publication of research carried out by Fritz Van Den Berg in The Netherlands. This research indicates that in stable atmospheric conditions, the effect of wind shear at altitudes in which modern wind turbines operate can be underestimated and results in considerable AM of up to 9.5dBA. Such an effect has the potential to have adverse impact.
206. Section 11.4 of the ES refers to a DTI commissioned investigation undertaken by Salford University in 2007 that concluded that there were only 4 wind farm locations in the UK where reported incidents of complaint from Amplitude Modulation occurred out of over 100 wind farm developments in operation at the time. No scientific investigation of AM was undertaken.
207. While the understanding of AM generation is limited and its onset and severity is not totally predictable, it is recognised by professional acousticians that AM can occur where there is a combination of high wind shear, wind direction, close proximity of turbines to one another and any topographical features which also increase turbulence around the turbine blades and in particular when the wind turbines are in a layout that is in a linear form.
208. The proposed turbines do have a linear form so there is concern that AM is a material consideration and further consideration should be given to whether an additional uncertainty allowance dB penalty should be added to predicted noise levels. The advice of an independent acoustic consultant is being sought on this matter.

Health effects of wind farms

209. The ES has provided little if any information on the potential health impacts of noise associated with wind farms.
210. Environmental impact assessments require at least the consideration of the direct and indirect health impacts.

To comply with health impact assessment requirements it is recommended that the applicant provides some commentary on this matter such as a literature of published health related academic papers on health and wind farms.

Assessment of the impact of wind turbine noise

211. The assessment of the proposed wind farm noise is contained within Appendix I.5 which details an assessment of the wind farm in accordance with the requirements of ETSU-R-97. It is concluded in 11.7.1 that at all receptor locations neighbouring the proposed wind farm, operational wind turbine noise will meet the requirements of ETSU-R-97 for amenity hours and night time operation, for both winter and summer conditions.
212. For the reasons stated it is not possible to reach an informed view on the noise impact of the proposed wind farm. Therefore it is not possible to conclude that the requirements of ETSU-R-97 have been met and that adverse impact will not be caused.

Assessment of the audibility for the animals at Linton Zoo

213. HES are primarily concerned with the impact of noise on humans. There is no planning guidance on this matter and there is limited academic research. It is unlikely that, due to the introduction of the wind farm, wildlife at the zoo will be subjected to an

overall sound pressure level that is louder than the levels that potentially already occur in the existing noise environment.

Construction Impacts

214. The ES considers construction impacts in section 11.8. Construction noise is inevitable but the impact is likely to be for a limited duration. It should be possible to limit noise impact to an acceptable level by using best practical means to minimise noise and by restricting construction hours / time. This can be adequately secured by condition. However, it is recommended that regard is given to the recently published and updated BS 5228 (2009).

Decommissioning Noise Impact

215. No assessment of noise during decommission has been undertaken. HES does not envisage decommissioning noise to be an issue that cannot be controlled by condition. However to comply with health impact assessment requirements it is recommended that the applicant provides some additional commentary / information on this matter

Shadow Flicker (section 12)

216. Under certain combinations of geographical position, time of day and year, the sun may pass behind the rotor of a wind turbine and cast a shadow. When blades rotate and the shadow passes a narrow window then a person within that room may perceive that the shadow appears to flick on and off - this effect is known as shadow flicker. It can have health and amenity effects.
217. Planning Policy Statement (PPS) 22 states that flicker only occurs within 10 rotor diameters of the turbines; a shadow flicker analysis using computer modelling for 2 residential properties which fall within 900m of the proposal was undertaken. The assessment is comprehensive and the study area is well defined. It is possible to calculate the number of hours per year that shadow flicker may occur at a dwelling from the relative position of a turbine to a dwelling, the geometry of the wind turbine and the latitude of the wind farm site.
218. It is concluded that theoretically that there are 4 receptor properties within the study area that could be exposed to shadow flicker although for very short periods. The worst affected property is reported in Table 12.1 as Wind Pump Cottage which could experience 121 shadow days per annum for a maximum of 30 minutes on each day a total of 41.56 shadow hours per annum. It should be noted that no actual survey of the receptor properties has been undertaken to assess window widths and habitable rooms, as these are required to have an actual impact.
219. The ES details operational frequencies that cause epilepsy. The applicant should confirm whether the proposed turbines operate outside the range to cause epilepsy as detailed in the ES, as most modern commercial scale turbines are likely to do so. The ES does not detail possible mitigation measures and it is stated in 12.6 that if shadow flicker does represent a nuisance at any residential or business properties, the individual issues will be investigated and remedied to an acceptable level. To comply with environmental impact assessment requirement mitigation measures should at least be considered and the available options should be detailed.
220. On balance shadow flicker is not a major concern and it should be possible to impose appropriate conditions to mitigate any impact.

HES conclusions

221. Noise is a substantive material consideration. The ES has not adequately addressed the impact of operational noise on amenity and health and the conclusion reached cannot be fully substantiated as detailed, a number of noise issues require further consideration, clarification and or justification. Additional background noise monitoring and anemometric data / information are also required to allow an informed decision to be made about the significance of impacts and material considerations. Planning conditions could be considered but due to the degree of uncertainties present in the assessment it is difficult at this stage to even consider draft conditions
223. In the absence of this additional information it is not possible to fully consider the merits of the application or fully assess the impact of the proposed development and the application should be refused.

Flood risk and pollution control

224. **Environment Agency:** Objection. The site lies within the Flood Zone 1, and current advice in PPS 25 'Development and Flood Risk' requires all applications of 1 ha or greater in FZ1 to be accompanied by a Flood Risk Assessment. No such assessment has been submitted as part of this planning application, and so flood risk has not been adequately considered.

Highway matters

225. **Cambridgeshire County Council (Office of Environment and Community Services):** Concern about possible highway safety issues during construction. Whilst recognizing that there is an existing access at this point from the dual carriageway to the grain silos, the intensification of use of this access at the end of what is a fast section of road may pose highway safety concerns.
226. **Cambridgeshire County Council as Local Highway Authority:** No objection. The LHA states that, due to the low traffic generation of site when operational, the Highway Authority considers that this phase of the development will have no significant impact on the adopted public highway. It considers that the delivery of the wind turbines to site and the potential increase in HGV movements fall outside the normal operation of the adopted highway. Therefore the LHA requests that a condition be attached to the effect that a traffic management plan be agreed before any construction works commence on site.
227. **Highways Agency:** No objection.

Nature conservation interests

228. **Council's Ecology Officer:** Objection. The ES acknowledges that two important bat hibernation sites are within 5km of the site. Thus there is a reasonable likelihood that bats may migrate across the wind farm site as they seek hibernation particularly given the number of woodlands on the Cambs/Essex boundary in which one would expect to find bat populations.
229. It has recently been established that the turbines pose risks to bats not solely through blade collision but also through barotrauma (internal haemorrhaging as a result of sudden air pressure drop). Thus if bats are present they can be harmed by wind turbines.
230. In the opinion of the Ecology Officer, the current surveys have not explored the entire site and its surrounding landscape features in enough detail. Whilst the applicant's studies had clearly begun prior to the publication of recent new guidelines, their

existence should not be ignored especially in the light of growing research on the threats posed by wind turbines to bats.

231. The ES in 5.3.3 shows how limited the survey was. No spring surveys were carried out at all (when bats might be leaving hibernation sites). The survey work undertaken falls short of the Eurobat guidelines in terms of effort and seasonality. The consideration of seasonality is very important given the two bat hibernation sites known to exist nearby.
232. Given the presence of the anemometer mast it would have been possible to locate an automatic recording device in order to collect such highflying bat data.
233. The Ecology Officer is surprised that the Hildersham Wood SSSI did not show any bat roosts, nor had been identified as having potential that should be explored in greater detail. A number of ash trees in the locality have rots holes and peeling bark, as do some oaks. Such features are potential bat roosts. This was possibly a consequence of inadequate survey effort.
234. Turbine 7 is partly sheltered from the prevailing southwest wind by Hildersham Wood and tree belts. This sheltered area has flying insects present that would draw in bats to feed in such night time conditions, but with a turbine located relatively near there is a risk that bats would come to harm. The threat could be further magnified if insects sought shelter in the lee of the turbine blades thus drawing bats near to the blades in order to catch such insects.
235. At present, the Ecology Officer considers that an inadequate level of effort has been undertaken to fully assess the likely impact upon bats of the local area and that both direct and indirect negative impacts could arise from the erection of wind turbines in this location. Policy NE/6 (Biodiversity) is relevant given the potential for impact on protected species (bats). It could also be argued that the potential for an indirect impact upon the Hildersham Wood SSSI exists, as whilst the SSSI is primarily designated due to the floral interest if bats are present then they would form part of the site's ecosystem and should be appropriately taken into account.
236. **Natural England:** No objection but has presented comments to be taken into account. Natural England (NE) is satisfied that the impact on the adjacent Hildersham Woods SSSI has been adequately assessed in the ES.
237. Birds – NE agrees that the collision impacts, along with displacement effects, are unlikely to have any substantial impact on the assemblage of birds on the site.
238. Bats - NE is disappointed with the level of survey effort undertaken across the site. Some surveys were taken during a light drizzle and not in optimal conditions. In addition, no form of remote detector systems or surveys at height was used to supplement the activity surveys and provide a more robust assessment of the site for bats. Clarification of the actual distances of turbines from boundary features with bat commuting/foraging potential (particularly with the more wooded southern section of the site) may be required. NE advises that turbines (measured from the edge of the rotor and swept area) should be located at least 50 m from any habitat features used by bats.
239. Other species- badgers are present at the site. A badger survey is recommended prior to construction, as a planning condition.

240. Post construction monitoring of bats and birds, together with enhancements for wildlife and future management of hedgerows, ponds etc should be secured by condition/ Section 106 Agreement.

Utilities

241. **Anglian Water Services Ltd:** No objection. There should be no affect on Anglian Water Services business microwave and UHF radio communication links.
242. **National Grid:** The Asset Protection Team operates to a standard of excluding a turbine if it falls within a zone calculated at five times the diameter of the rotor blades. Using this measure, National Grid advises that the proposed scheme would have a 'moderate' risk.
243. **The Joint Radio Company Ltd:** No objection. The JRC analyses proposals for wind farms on behalf of the UK fuel and power industry to assess the potential for interference to radio systems operated by utility companies. Based on known interference scenarios, the JRC does not foresee any potential problems arising from the proposed development.

Air safety

245. **BAA Aerodrome Safeguarding on behalf of Stansted Airport Ltd:** Objection. All of the turbines would be visible to the radars at Stansted and Debden and have the potential to cause false plots on the radar screen. This could result in an inability to detect small aircraft at low altitude in the airspace above the wind farm, resulting in an adverse effect on the safe and efficient operations into and out of the airport.
246. **Civil Aviation Authority (Directorate of Airspace Policy):** CAA makes no overall recommendation, but notes that the applicant undertook consultation pre-application discussions with them. Some issues highlighted in those discussions have not been addressed in the submitted Aircraft Routes and Airspace Supplement document. These include a potential need for aviation obstruction lighting, and the potential difficulties for aviation should further wind farm developments take place in this area, and on the need to advise the Defence Geographic Centre of details of the turbine development. The rotor blades and upper part of the masts should be painted white, unless otherwise indicated by an aeronautical study. The CAA notes from these pre-application discussions the concern of Cambridge Airport about radar performance, which do not appear to have been resolved.
247. **NATS (En Route) Plc (NERL):** Objection. NATS (formerly National Air Traffic Services Ltd) is the United Kingdom's main air navigation service provider. It provides air traffic control to all en-route aircraft in UK airspace, and to aircraft at 15 UK airports. NATS (En Route) Plc (NERL), is one of its main service provision companies, which holds the monopoly of civilian en-route air traffic control over the UK and is regulated by the CAA. The NERL Safeguarding Office has advised that, based on its preliminary technical findings, the proposed development does conflict with its safeguarding criteria. An operational assessment is awaited.
248. **Defence Estates Operations North - Safeguarding Wind Energy:** Objection. The Defence Procurement Agency is concerned that the radar provider at Cambridge Airport would be unable to provide a full Air Traffic Radar service in the area of the proposed wind farm. The turbines will be 14.1 km from, in line of sight to, and will cause unacceptable interference to the radar at Cambridge Airport. Following trials carried out in 2005, it has been concluded that wind turbines can affect the probability of detection of aircraft flying over or in the vicinity of wind turbines. If the developer is

able to overcome these issues, the MoD may recommend that the turbines be fitted with aviation lighting.

249. **Marshall of Cambridge (Holding) Ltd, Cambridge Airport:** Objection. The proposed wind farm will interfere with radar operation at the airport, through 1) radar clutter, resulting in a lowering of the probability of detection of aircraft in the region of the clutter; 2) fast moving blade tips appearing as aircraft on the display; 3) confusion for radar operators in distinguishing between real aircraft and false targets; 4) creation of a radar 'shadow' behind the turbines. Partial mitigation may be possible, but would require all aircraft using the standard inbound and outbound routes to fly more track miles and departing traffic having to turn right over the City of Cambridge. This would result in more noise pollution over Cambridge City and aircraft flying additional miles, offsetting any environmental gain of the wind farm. Cambridge Airport has set out a package of measures which could provide a solution to these issues. The developer would have to deliver a proven solution before Cambridge Airport would lift this objection. In the event of the Wadlow farm wind farm being allowed, the cumulative effect of both wind farms would put Marshall's MoD approval at risk, which would be unacceptable to the company.
250. **Imperial War Museum Duxford:** No objection. The proposed development will not interfere with the Visual Flight Rule operation of the airfield.
251. The responses of the following consultees are awaited: RSPB, Cambridge Bat Group, British Horse Society Eastern Region, Ofcom, BT Group, Orange PCS Ltd, Vodafone Limited, T-Mobile (UK) Ltd, O2, Cable and Wireless, The BBC, Cambridge University for Lords Bridge Radio Telescope.

Representations

Objections

252. A total of 1306 individual objections to the proposal have been received. In summary form these can be grouped as follows, together with the number of responses. The full text of all letters is available to view on the Council's website page for this application.

	Harm to Landscape
	928
	Spoiling Specific Views
	844
Landscape & Visual Impact	Inappropriate Height / Scale
	750
	Design of Turbines – Colour
	19
	Cumulative with Wadlow Farm
	1
	Noise / Vibration
	938
Amenity Impact	Shadow Flicker
	507
	Construction Noise
	3
Health & Safety	Ice / Snow / Fire
	470
	Construction
	9

	Ecology / SSSI
	667
	Birds
	566
Environmental Impact	Flooding
	11
	Listed Buildings / Conservation Areas
	589
Heritage Impact	Archaeology
	6
	Electricity Grid / Pylons
	51
	Gas
Utilities Impact	1
	Construction Period
	509
	In Operation
Traffic and Highways / Access	673
	Aircraft & Radar
	15
	TV Interference
	546
Electromagnetic Impact	Radio Interference
	22
	Footpath
	577
	Bridleway
Recreation Impact	578
	Linton Zoo
	712
	Businesses / Employment
Economy	112
	Suitability of Site / Performance
	838
	National Energy Policy / Offshore
Energy Issues	149
	Decommissioning Issues
	10
Decommissioning Precedent	Precedent for other wind farms
	508
Other	Other
	13

253. **Stop Linton Wind Farm Action Group:**

The Stop LWF objection consists of 3 volumes. Volume 1 is their Interim Report covering a variety of issues; Volume 2 is the Landscape Architect's Report and Volume 3 is a document of Blimp photographs. The full submission of SWLF is available to view on the Council's website page for this application. A summary is attached as [Appendix 1](#).

Ickleton Society:

254. Detrimental impact on the landscape. The ridge on which they would be situated is in an area of open and gently undulating countryside and the turbines would be visible for miles around. This is one of the few remaining areas of land of any size in this vicinity in which it is possible to get some sense of remoteness. The turbines will

have significant visual impact not only on the villages immediately surrounding the site but for a considerable distance in all directions. The footpaths and bridleways through and around the site are well used. The visual and noise impact of the turbines would ruin the experience for users of these paths. It may mean that it is no longer possible for many horses to use the bridleway. Opinions vary over the effect of noise from wind turbines on people living close to them. Given the uncertainty it seems to us that planners should err on the side of caution and ensure that wind farms are not located close to houses. Linton Zoo is particularly concerned about the effect of the low frequency noise and vibration that would come from the wind turbines and to which many animals and birds have shown to be sensitive. The proposals would have ecological impacts both during construction and subsequently. The turbines would cause the death of significant numbers of birds and bats. There have been many serious and fatal road accidents on the A1307 near Linton. A wind farm that is highly visible along this stretch will be a great distraction to drivers and could result in more road accidents. This is not a particularly windy part of the UK.

Linton Zoological Gardens:

258. It is well known that animals are much more attuned to their environment and are especially more sensitive to noise than humans. The Zoo is about 1km from the nearest turbine and we know that the Davis family have had to leave their home at Deeping St Nicholas, which is 930m away from smaller turbines, due to noise problems. Trying to get endangered species to breed is difficult enough and a lot of the success depends on creating exactly the right environment. Anything that disturbs that environment jeopardises the complete programme. The turbines would be a risk to our free flying displays of birds.
257. Wind is a universal resource capable of being harvested anywhere. There are thousands of potential sites for onshore wind farms where the impacts on countryside and people are much less. Linton Zoo on the other hand cannot up and move. The noise consultants are not wildlife experts and undertake noise assessments for wind farm developers putting in planning applications for onshore wind farms. People have mentioned the turbine at Wood Green Animal Sanctuary but there is little similarity between domesticated and wild animals and Wood Green has a quick turn around of animals rather than a permanent breeding centre and their one turbine is much smaller. Enertrag have admitted that problems have occurred with elephants, cassowaries and okapi which leads to the question – what other wildlife may also be affected? They have done no additional analysis into the noise spectrum produced by wind turbines or the frequencies beyond the range of human hearing and this is dismissed on the basis that the volume will be below the capacity of the human ear, but what about animal ears?
258. Their own data shows that for certain wind strengths the noise from the turbines would be up to 10dB higher than the background noise. To claim that the noise from the road is a mitigating factor casts doubt on the robustness of their whole argument. Wind farm noise is much more intrusive than road noise because of its rhythmical impulsive nature. Linton Zoo feels it is only right to adopt the precautionary principle and the application should be refused.

Letters of support

259. 21 letters in support of the scheme have been received from third party individuals. These refer to the importance and benefits of renewable energy

260. **Cambridge Friends of the Earth:** Climate change is regarded by many as one of the most serious threats facing the world's environment, economy and society. We consider it is absolutely essential that renewable energy projects are allowed to progress. The UK benefits from 40% of Western Europe's wind energy resource which could provide the UK with an enviable diversity and security of supply, factors that form a key component of the Government's energy policy. The Regional Spatial Strategy requires 1192MW of installed capacity of renewable energy by 2010. CFoE is aware that there has been some local opposition. It is also aware that a lot of their fears surrounding the proposed development are based on misleading and inaccurate information and that it is actually only a vocal minority of people who feel that way.

Response by the Applicant

261. Enertrag has responded to concerns raised by consultees, Stop Linton Wind Farm Action Group, and objectors. This is summarised as follows:
262. Need: As per PPS1 Climate Change, it is not necessary to prove the need for renewable energy. The need is most certainly there, as a country we are well behind renewable energy targets. There are no precedents set in planning law. Enertrag has complied with PPS 22.
263. Ecology: In consultation with Natural England, all turbines have been sited in excess of 100 m from hedgerows where bat activity may occur. Enertrag has satisfied Natural England and believes that no further information is necessary.
264. Environmental impact: There is no evidence to show that turbines give rise to health problems. The sound report shows that Enertrag complies with ETSU-R- 97. The impact on residential amenity will be very minor.
265. Safety: The spacing of turbines depends on many things; ecology, communications, archaeology, etc. The industry accepted recommendations for spacing are between 6 and 7 blade diameters in the prevailing wind direction, and 4 and 5 diameters in the cross direction. The proposal is within these ranges. Even if not, there would certainly be no safety issues.
266. Bridleways and footpaths: With the exception of Turbine 6, which is 103 m from the nearest footpath/bridleway, all turbines are in excess of "fall over distance" from footways and bridleways (125 m or more). Fall over distance is the accepted standard for clearance to roads/footpaths. There is no prescribed distance in legislation. The British Horse Society in general compromises at around fall over distance. This approach has been upheld in recent public inquiries. Walkers, riders and cyclists are relatively few on the site. Enertrag cannot change the positions of the turbines.
267. Flooding: Enertrag has contacted the Environment Agency to discuss its concerns. Enertrag will submit a very basic flood risk assessment.
268. Archaeology: Enertrag has consulted with the County Archaeological Unit during the preparation of the ES. A full trenching survey has been completed on site, and the County Archaeologist has agreed the findings of the survey. Enertrag considers that the requirements of the County Archaeological Unit have been met.
269. Cambridge Airport: The objection by Defence Estates on behalf of Cambridge Airport is from the procurement wing of the MoD. This objection is not based on any operationally justifiable grounds. Marshall's airport is almost certainly vacating the site in the foreseeable future. This is an argument put forward at many public inquiries and nearly always dismissed. This is not a safety issue, otherwise the CAA would

have objected, which they have not. Enertrag considers this to be a totally unsustainable objection.

270. Landscape: This area has no national or even local designation with regards to landscape quality. It has pylons bisecting the site with industrial structures in the form of grain silos present. The setting of this landscape is already charged with industrial structures. Some people do not object to the sight of turbines, some say they add interest to the view. The quoting of Green Belt legislation is wrong. Our consideration is that the impact of these turbines in an already industrially charged landscape is not major.
271. Cultural heritage: The ES has addressed cultural heritage, the listed buildings being mostly in the villages. Little archaeology has been found. The setting of the listed buildings will not be compromised. English Heritage has been consulted and has raised no issues.
272. Highway safety: the distraction of these turbines would be at some distance from the road, amid that of the sight of pylons and silos. It is not intended to widen the A1307 at this point, therefore this is not a sustainable objection.
273. Linton Zoo: This is an unsustainable objection, with no published evidence of noise problems with animals. Enertrag has addressed the issues within the ES.

Planning Comments

Renewable energy targets

274. Both strategic and local planning policies recognise the benefits and the strong presumption in favour of renewable energy development. Policies ENG2 and NE/2 are expressed in positive terms. The thrust of government advice, as confirmed by the Council's Sustainability Officer and EEDA indicate the necessity for the provision of wind farm capacity in this region, to meet existing and evolving targets. The proposal represents a relatively small wind farm, which would contribute to national and regional targets for onshore renewable energy and so is to be supported in principle. It could also be considered as a small group in the context of the sub-text to Policy NE/2 of the LDF.

Landscape and cultural heritage

275. Members will have an opportunity to view the site in order to consider the visual impact of the proposal. The site is devoid of any national or local landscape designation, however this does not therefore mean that the prevailing landscape character is not worthy of protection. The Council's Landscape Design Officer has provided an assessment which highlights the sensitivity of the landscape and the harm that would result from the placing of such tall structures on this elevated land. The decision on the appeal for a wind farm at West Wratting is awaited and, if allowed, would add a cumulative impact to the harm to the landscape. The applicant has not indicated a willingness to reduce the height or number of the proposed turbines. Notwithstanding the lack of landscape designation and the presence of agricultural buildings and pylons on and adjacent to the site, the development is considered to fail to conserve local landscape character, and would be contrary to policies ENV2, D/1p, DP/2 1a,f, DP/3m and NE/4.
276. The Council's Conservation Officer has presented a detailed assessment of the impact on the setting of listed buildings and conservation areas within the visual zone of influence of the development. This has highlighted numerous instances of harm,

which the applicant does not appear to be willing to mitigate. The proposal fails to comply with policies ENV6, DP/1r, DP/3l, CH/4 and CH/5.

Noise and shadow flicker

277. The Council's Health and Environmental Services has indicated that noise and shadow flicker are the two principal environmental considerations arising from the proposed development. Its overall conclusion is that there is insufficient evidence of adequate detail and quality to assess the noise impact of the proposal. It has less concern on the ground of shadow flicker. The proposal as submitted fails to demonstrate compliance with policies DP/3j,n and NE/15. This is a holding objection, which may be resolved with further information.

Wildlife

278. The Council's Ecology Officer has expressed concern at the quality of the assessment of the potential impact on local bats. Similar reservations have been lodged by English Nature. The proposal as submitted fails to demonstrate compliance with policies ENV3, DP/1o, NE/6 and NE/7. This is a holding objection, which may be resolved with further information.

Highway issues, including public rights of way

279. Cambridgeshire County Council (Office of Environment and Community Services and Countryside Access Team), and walkers and riders groups have objected on to the proximity of the turbines (T2, T4 and T6) to Linton Public Bridleway No. 7 and Public Footpath No.11. Although there is no formal separation distance requirement in government guidance for safety purposes, when in operation the proximity of the turbines will be likely to spoil the pleasure of the use of these rights of way, and others more widely to some degree. The proposal fails to comply with policies T9, DP/1m and DP/3s.
280. The comments received from Cambridgeshire County Council (Office of Environment and Community Services) and the County Council as local highway authority concerning highway safety during the construction period are not fully consistent and it is recommended that further clarification be sought prior to this matter being considered at the public inquiry. Third party concerns about driver distraction on the A1307 have not been supported by these consultees.

Electromagnetic interference

281. The proposal has drawn objections on the grounds of adverse impact on radar from Defence Estates, NERL Safeguarding, and Cambridge Airport. The proposal as submitted fails to demonstrate compliance with guidance in PPS22. This is a holding objection, which may be resolved with further information.
282. There is no evidence from consultees that disturbance to telecommunications or television reception will arise as a result of the development. A document produced on behalf of the Renewables Advisory Board and BERR advises that impacts on television reception could be controlled by condition and a legal agreement requiring a bond from the applicant to carry out any remedial works required. It is not recommended that a refusal on this ground could be substantiated, and that mitigation could reasonably be achieved by the recommended means.

Flood Risk

283. The Environment Agency has not indicated receipt of an acceptable flood risk assessment as required by them. The proposal as submitted fails to demonstrate compliance with policies DP/1a and NE/11. This is a holding objection, which may be resolved with further information.

Utility apparatus

284. National Grid has indicated that there is a medium risk that the overhead power lines adjacent to the site may be affected by the development. It appears that T2 and T4 would fall inside the zone that it would wish to be excluded from wind turbines. It is not recommended that a refusal on this ground could be substantiated at this time until possible mitigation measures have been examined in consultation with National Grid.

Linton Zoo

285. The concerns raised by Linton Zoo and third party objectors about disturbance to animals from noise and others effects have not been supported by the Council's Health and Environmental Services. It is not recommended that a refusal on this ground could be substantiated without convincing evidence being available.

Other Matters

The applicant's proposal to set up a Trust Fund is a voluntary offer and is not a material planning consideration relevant to the deliberation of the application.

Conclusion

287. Members will wish to balance the strong presumption in favour of renewable energy provision with the various types of harm arising from this scheme that have been identified in the course of the application, and the extent to which any such harms could be mitigated by condition, or legal agreement, or by further discussions with the developer. The need for this balance of judgements is encapsulated in policy NE/2, which requires renewable energy schemes to be acceptable subject to accordance with development control criteria as set out in policies DP/1, DP/2 and DP/3. This report has highlighted harm which is not readily amenable to mitigation without significant reduction in either the number, scale or siting of turbines. Other possible harms may be capable of resolution or mitigation with more surveys or clarification from the applicant. Given that significant concern about likely impacts on landscape quality, the setting of listed buildings and conservation areas, and to users of the bridleway and public footpaths on the site, it is considered that normal development control criteria would not be met in the submitted scheme, and that the planning application would not be supported.
288. If Members accept this position, delegated authority is requested to enable officers to continue discussions with applicant, as is recommended practice in the lead up to a public inquiry, in order to isolate and clarify the main issues to be considered by the appeal Inspector.

Conditions

289. The following conditions have been recommended by consultees to be included in the evidence to be presented to the Inspector:
- (a) A full condition survey to be undertaken in respect of the bridleway and its future improvement/maintenance.
 - (b) Implementation of a programme of archaeological investigation.
 - (c) Pre-construction survey for badgers.
 - (d) Post-construction monitoring for birds and bats.
 - (e) A scheme of enhancement works for wildlife and future management to be agreed in accordance with the ES, to be secured by a S106 Agreement.

- (f) A scheme of mitigation of disturbance to horses and riders using Bridleway No.7, during construction and in operation, to be agreed.
- (g) To prevent the health effects of shadow flicker, any wind turbine shall only have an operational blade frequency outside the range of 2.5 and 30 flashes per second (hertz): the general frequency at which photosensitive epilepsy may be triggered.
- (h) Prior to the operation of any wind turbine a shadow flicker mitigation scheme / protocol for shadow flicker which may be experienced within habitable rooms within any dwelling, shall be submitted to and approved in writing by the Local Planning Authority. Thereafter the operation of the turbines shall be in accordance with the approved shadow flicker mitigation scheme / protocol unless the Local Planning Authority gives its prior written consent to any variation.
- (i) Traffic management plan be agreed before any construction works commence on site.

Recommendation

- 290 (A) In the event that South Cambridgeshire District Council had authority to determine the application registered 4 March 2009; it would have been refused for the following reasons:
1. The proposed development would significantly harm a number of Listed buildings and Conservation Areas by virtue of its location, competition, size, height, bulk, industrial appearance, visual disturbance and character. The submission significantly underestimates the effect of the proposed wind farm and also fails to include any investigation of less harmful alternatives and any mitigation for the harm. The proposal therefore will not comply with Policies ENV6, DP/1r, DP/3l, CH/4 and CH/5; or the relevant policies and guidance in PPG15 and PPS22.
 2. As a result of the overbearing scale of the development, particularly in relation to Linton, and the distinctive smaller-scale landscape surrounding the village; and the effects of the development over wide areas of the tranquil chalk landscape and associated public rights of way, including the cumulative effects with Wadlow wind farm, the development would fail to conserve local landscape character, and would be contrary to development plan policies ENV2, D/1p, DP/2 1a,f, DP/3m and NE/4.
 3. The proximity of the turbines to Linton Public Bridleway No. 7 and Public Footpath No.11 would seriously harm the enjoyment of the public rights of way. The proposed location of the T6 is approximately 80m away from the bridleway; T4 has 110 m separation distance from the bridleway and T2 is 180m away. The proposal does not comply with Policy T9 of the East of England Plan, which seeks to improve access to the countryside and recreational opportunities.
 4. Noise is a substantive material consideration. The submitted Environmental Statement has not adequately addressed the impact of operational noise on amenity and health and the conclusion reached has not been fully substantiated as detailed. A number of noise issues require further consideration, clarification and or justification. Additional background noise monitoring and anemometric data / information are also required to allow an informed decision to be made

about the significance of impacts and material considerations. The proposal as submitted fails to demonstrate compliance with development plan policies DP/3j,n and NE/15.

5. The site lies within the Environment Agency Flood Zone 1, and current advice in PPS 25 'Development and Flood Risk' requires all applications of 1 ha or greater in FZ1 to be accompanied by a Flood Risk Assessment. No such assessment has been submitted as part of this planning application, and so flood risk has not been adequately considered. The proposal as submitted fails to demonstrate compliance with development plan policies DP/1a and NE/11.
6. The likely impact of the proposed development upon bats in the local area, where direct and indirect negative impacts could arise from the erection of wind turbines in this location, has not been adequately investigated. The Environmental Statement, as submitted, does not comply with development plan policies ENV3, DP/1, DP/3 and NE/6, Biodiversity Supplementary Planning Document (2009) and the provisions for the protection of bats under the Wildlife and Countryside Act 1981.
7. The proposed wind turbines would be visible to the radars at Stansted and Debden and have the potential to cause false plots on the radar screen. This could result in an inability to detect small aircraft at low altitude in the airspace above the proposed wind farm, resulting in an adverse effect on the safe and efficient operations into and out of Stansted airport. Similar concerns apply to Cambridge Airport. PPS22 places the onus on the applicant to demonstrate that the proposal would have no adverse effect on aviation interests and this has not been demonstrated.

- B. That officers be granted delegated authority to continue discussions with the developer to clarify the main issues to be considered at a public inquiry.

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

- PPS 1; Supplement to PPS 1; PPS 7; PPG 8; PPS 9; PPG 15; PPG 16; PPG 17; PPS 22; Companion Guide to PPS 22; PPG 24; Circular 1/2003.
- The East of England Plan (2008)
- South Cambridgeshire Local Development Framework Core Strategy DPD (2007)
- South Cambridgeshire Local Development Framework Development Control Policies DPD (2007)
- Planning File refs S/0847/08/F, S/1018/06/F
- Stop Linton Wind Farm objection submission (viewable on the Council's website)
- Developments Affecting Conservation Areas Supplementary Planning Document (2009)
- Listed Buildings Supplementary Planning Document (2009)
- Biodiversity Supplementary Planning Document (2009)

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