

Item No. 7**SCHEDULE A**

APPLICATION NUMBER	MB/09/00118/FULL
LOCATION	Land To The North Of, Edworth Road, Langford
PROPOSAL	Full: Erection of 10 Wind turbines, control building and monitoring mast. Provision of associated hardstanding areas and on-site track accesses.
PARISH	Langford & Biggleswade
WARD	Langford & Henlow, Biggleswade
WARD COUNCILLORS	Cllr Jon Clarke & Cllr Tony Rogers, Cllr Peter Vickers, Cllr Maurice Jones, Cllr David Lawrence & Cllr Jane Lawrence
CASE OFFICER	David Lamb & Kate Phillips
DATE REGISTERED	11 February 2009
EXPIRY DATE	03 June 2009
APPLICANT	The Co-Operative Group
AGENT	EMP-Squared
REASON FOR COMMITTEE TO DETERMINE	The application site contains land owned by Central Bedfordshire Council, and in view of the public interest in the proposal.
RECOMMENDED DECISION	Full Application - Refused

SITE LOCATION:

The application site lies to the east of the East Coast Main railway line and to the west of the A1. Langford is located nearby to the west of the site, and Biggleswade to the north east. To the north, the site adjoins Beaufort Farm with woodland beyond. To the south is Edworth Road, and the local landmark of Topleys Hill water tower is sited to the south east.

THE APPLICATION:

This is a full planning application for the erection of a 10 turbine wind farm together with associated access roads, hardstanding areas and control building, with a total site area of approximately 450 hectares. The application is accompanied by an Environmental Statement (ES).

The ES states that the physical characteristics of individual turbine models can vary depending on the manufacturer of the turbines. In order that the ES considers the worst case scenario, it is based on the largest size of turbine which may be installed. The maximum dimensions of the turbines chosen for this site would be 110 metres from their base to the height of the blade tip when in a vertical position. Each blade would measure up to 40 metres, with a maximum hub height (i.e. the height excluding the turbine blades) of 70 metres. Subject to these maximum

dimensions, the exact design and size of the turbines would depend on their commercial availability, and following discussions with the Council. This is not an uncommon approach by wind farm developers given the often lengthy time between the initial design of a scheme and its implementation.

Each turbine would be served by an underground cable which would provide a connection to the new substation, and thereafter to the national grid. The substation would be located at the southwest portion of the site, and would be single storey measuring 20 X 8 metres with a pitched tile roof. Also within this building would be a small office and toilet for maintenance staff and visitors. This approach is based on experience at other wind farm sites.

A grid connection to the local distribution system is not included within the application, and is likely to be subject to consent under the Electricity Act. The ES confirms that access to the site for construction and maintenance purposes would be taken from the south off Edworth Road, where a temporary construction compound would be provided during the construction of the development.

The wind farm is expected to generate in the region of 47 million kilowatt hours (units) of electricity each year. Based on the average UK household electricity consumption of 4,100 kWh per annum (PPS22 Guidance (OFGEM) 2004), the ES advises that the proposed wind farm would generate enough electricity to power 11,400 homes. The ES advises that the turbines would have a design life of 20-25 years.

When it was submitted originally in January 2009, the application proposed 16 wind turbines. However, more recently the application has been amended to reduce the number of turbines to 10, which in turn decreased the number of onsite access tracks. The northern substation originally proposed has been removed from the scheme, and turbine 7 has been relocated 43 metres to the south to provide a larger buffer zone for bats.

The ES has been prepared in accordance with the Town & Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999. It is considered that the ES complies with the requirements of the Regulations and provides a sound basis to inform the Council's determination of the application.

RELEVANT POLICY:

National Policy

Planning Policy Statement 1: Delivering Sustainable Development (2005)
Supplement to Planning Policy Statement 1: Planning and Climate Change (2007)
Planning Policy Statement 22: Renewable Energy (2004)
Planning for Renewable Energy: A Companion Guide to PPS22
Planning Policy Statement: Consultation – Consultation on a Planning Policy

Statement: Planning for a Low Carbon Future in a Changing Climate (2010)
The UK Low Carbon Transition Plan (2009)
The UK Renewable Energy Strategy (2009)
Revised Draft Overarching National Policy Statement for Energy (EN-1) (2010)
Revised Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) (2010)
Planning Policy Statement 5: Planning for the Historic Environment (2010)
Planning Policy Statement 7: Sustainable Development in Rural Areas (2004)
Planning Policy Statement 9: Biodiversity and Geological Conservation (2005)
Planning Policy Guidance 24: Noise (1994)

Regional Policy

East of England Plan (2008)

Central Bedfordshire Council's Core Strategy and Development Management Policies Development Plan Document (2009)

Policy CS13 Climate change
Policy DM1 Renewable Energy
Policy CS15 Heritage
Policy CS16 Landscape and woodland
Policy DM14 Landscape and woodland
Policy DM15 Biodiversity

Bedfordshire Structure Plan 2011

Not applicable

South Bedfordshire Local Plan Review Policies

Not applicable

Supplementary Planning Guidance

Not applicable

RELEVANT PLANNING HISTORY

MB/08/01311/FULL Full: Erection of 60m high Meteorological Monitoring Mast –
Granted 14.10.08

REPRESENTATIONS – 16 TURBINES:

Town/ Parish Councils (in alphabetical order)

Ashwell Parish Council	It is the current policy of Ashwell Parish Council not to comment on planning applications that are outside the parish.
Astwick Parish Council	No comments received
Biggleswade Town Council	Object It was resolved that the Town Council raise a <u>HOLDING OBJECTION</u> to this application until further information is obtained from ongoing consultation.
Caldecote & Newnham Parish Council	No comments received
Clifton Parish Council	Clifton Parish Council has considered the application and whilst a majority do not object it wishes to make the following comments: <ol style="list-style-type: none">1. One should consider the comments made by Henlow and Langford Parish Councils and residents in those two villages carefully. They are most likely to be affected by the proposal.2. Viewpoint 12 in Vol. 4 of the submissions shows a view taken from the footpath at Clifton/Henlow showing the impact of the wind turbines. This photograph is taken from a low spot off Stockbridge Road and properties built higher up would be affected more.3. If the proposal were to be approved could the turbines be camouflaged so as not to make such an impact on the surrounding countryside including that of the Ivel Valley Project.
Dunton Parish Council	No objection.
Edworth Parish Meeting	No comments received
Henlow Parish Council	No objection. <i><u>RESOLVED:</u> "As a Council we are in favour of renewable energy and the proposed development will not have a negative impact"</i>

Hinxworth Parish Council

on the residents of Henlow. We therefore have NO OBJECTION to the application.”
No objection.

Langford Parish Council

Some concern was raised about the possibility of the turbines interfering with the signal from the Sandy Television transmitter. We ask for assurances from you that if there is a problem then the applicants will take remedial action.

Object

The response included a detailed response to the application in the form of a report. The executive summary is given below and the full report has been appended to the committee report.

Executive Summary

The Parish Council has consulted widely and conscientiously with its residents, neighbours and stakeholders and unanimously and rigorously objects to this proposal. Construction on this scale will destroy the village landscape forever and adversely impact the lives of those 4000 people who reside there. It is in total conflict with the area development plan and is a proposal without merit or precedent which must be put aside without any further waste of public resources.

Northill Parish Council
Old Warden Parish Council
Radwell PC
Shefford Town Council
Southill Parish Council

No objection.
No comments received
No comments received
No objection.

Object

Southill Parish Council has considered the above planning application and after some debate has decided to object to it. The Council has serious concerns over the noise and visual blight as well as lesser concerns over the landscaping and the use of agricultural land.

Nearby residents

Objection letters

209 letters of **objection** were received in response to the initial scheme for 16 turbines. The number of letters received does not represent the number of people objecting as some people wrote more than once.

It should also be noted that many people used a template letter and numerous people living within the same households have often sent separate, yet identical letters. The relevant issues are summarised below:

Landscape character

- Prominent location
- Tall moving structures are too prominent in open landscape
- Blot on the landscape
- Unsightly/out of keeping with area
- Industrial character of turbines
- Significant alteration to the skyline
- Adversely affect historic/ rural landscape
- Will be visible from nearby conservation area and in views of listed buildings
- Change from agriculture to industrial land
- Shouldn't use a Greenfield site – eg. putting down hardstanding as well as turbines etc.
- Shouldn't develop on useful agricultural land
- Turbines are too tall (comparisons made to other structures in England)
- Out of scale with surrounding features
- Countryside in this location is a wonderful example of Bedfordshire
- All the other elements of the proposal (sub-station, roads etc.) will also have a detrimental impact on character of area.
- Contrary to PPS7 – retaining rural character of countryside/ no development etc.
- Running entirely parallel to the linear village of Langford.
- Density – too many too close together
- Impact will be more widespread than the associated documents indicate
- Will there be a definite commitment to removing them after 25 years.

Residential amenity

- Noise
- Querying the use of the ETSU-R-97 guidance – too old
- Audible and low frequency noise pollution

- Shadow flicker
- Some people's outlook will be dominated by turbines
- Overbearing impact of turbines to some houses due to proximity
- Vibration will lead to lack of sleep and depression
- The height is distressing
- Long term impacts unknown
- Distraction to traffic on A1 and other nearby roads
- Edworth Road is already a dangerous road, adding a distraction will make it worse
- Ice can fall of the blades in winter
- Detrimental impact on people with hearing problems
- Impact on nearby school
- Sufferers of acute wind farm phobia
- Can cause nervousness
- Insomnia
- Mental health problems
- Noise will be worse than railway because it will be ongoing
- Stories in the press of turbines collapsing or parts falling off at speed.
- Wind turbine syndrome
- Impact on school
- Adverse impact on birds, bats etc.
- Adverse impact on flora and fauna
- The RSPB are wrong in stating they have no objection – they are relying on propaganda generated by energy companies
- Bio-diversity will suffer
- Will affect wildlife in the wider area
- The land would be better used for growing crops
- Flooding as a result of impermeable concrete foundations
- Footpaths and bridleways are currently well-used but in the future users will have to take extra precautions (eg. due to falling ice etc.)
- Using routes in the area will be less enjoyable due to whirr of turbines
- People are encouraged to lead a healthy lifestyle but this development would prevent people from using footpaths etc. in the surrounding area
- Risk to animals such as horses – eg. bolting due to fear
- RAF Henlow
- Shuttleworth
- Gliders

Health and safety

Wildlife

Footpaths/
bridleways

Aviation

- Low flying aircraft
- Hot air balloons
- Microlights
- TV disruption
- BBC notes that TV reception can be affected by wind farms – 4320 in this case.
- Problems wont be apparent until its too late.
- Heavy traffic
- Road closures during construction
- Jobs not likely to be for local people
- Dirt and dust will be stirred up during construction affecting the village
- Massive amounts of concrete are required to build the foundations
- Uprooting hedges etc.
- Will introduce more, and larger, traffic into the village

None planning matters

- Efficiency/ economic viability
- Wind is an unreliable source of energy
- Value of homes will decrease
- Developers will get rich, no-one else benefits
- Energy created would not go directly to Langford residents, those most affected.
- No direct advantages to residents of Langford or Biggleswade
- Shouldn't be called Biggleswade Wind Farm
- Lack of prior consultation with nearby residents
- The Council owns a lot of the land, they will benefit financially
- Complaints regarding the leaflet sent out by South Beds Friends of the Earth – misleading etc.
- The Co-op have not been honest
- Photomontages are misleading/ disingenuous
- Off-shore development would be better
- Another location, further away from village would be better
- Precedent
- Other proposals for development so close to house has been refused

Support letters

32 letters of **support** were received in response to the initial scheme for 16 turbines.

The main points are summarised below:

- Reference to PPS1 which is in support of tackling climate change

- As long as appropriate conditions are attached to any planning permission granted, any impacts on birds etc. can be adequately mitigated
- The need for renewable energy/ saving the planet
- Should trust wildlife-related consultees who are satisfied that there will be no adverse impact on wildlife at the site
- Should prove that Bedfordshire is forward thinking
- Need to put turbines somewhere.
- Beautiful appearance of turbines
- People should not have a NIMBY attitude
- Arguments put forward in the objection letters circulating throughout the village are ill-founded
- The Co-op is an ethically driven organisation
- The local area is not recognised for its beauty and would not be significantly degraded by the development
- Overwhelming need to address energy problems in the UK
- Obviously a good place to site the wind farm or lots of money wouldn't be invested to do this.
- Rent to landowners/ money to Parish Councils and money earned by the Council will be beneficial
- Must hit climate change targets
- Helps to serve some of our energy needs
- Wind is free – good source of energy
- Wind farms are more attractive than some other forms of energy production (eg. nuclear or coal plants)
- Job generation
- Tourism feature for Bedfordshire

CONSULTATION/ PUBLICITY RESPONSES – 16 TURBINES

Publicity dates

Site notices posted	18.3.09
Biggleswade Chronicle	20.2.09

Internal

Local Development Framework Team	Guidance given on the relevant policy (in March 2009) to consider in determining the application.
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Heritage and Design Team	Reference made to the Mid Beds Landscape Character Assessment. Reference to nearby listed buildings, conservation areas, registered parks and gardens and the potential zone of visual
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influence.

Visual impact will be significant over a considerable area. Refer to advice in PPS22 that planning permission should only be granted where it would not compromise nationally recognised designations.

Reference to appeal decisions.

Overall, the heritage asset restrictions on the proposed development of the site are not so significant as to be a principal determining issue in refusing the proposed wind farm.

Landscape Consultant

The location could be good from a landscape point of view but may not be so favourable in terms of its likely visual impacts on local communities.

Bedfordshire County Council
Highways Team
Public Protection Team

(Detailed comments are in the full report).
No objection, subject to conditions.

Archaeological officer

A specialist noise consultant was commissioned to assess the proposal. He concluded that the noise impacts of the turbines would be unacceptable.
(Detailed comments are in the full report).
There are archaeological remains at 9 of the turbine sites. The remains are important in the context of understanding the development of the rural landscape in east Bedfordshire, but do not represent an over-riding constraint on development provided that adequate provision is made to investigate and record them in advance of development.

Rights of Way officer

Suggested condition.

Bedfordshire County Council
Countryside Access Service – Rights
of Way Officer

Echo comments from the County Council's relevant officer.

Three letters were received from the County's Rights of Way Officer.

Initially he objected to the scheme on the basis that the turbines would be too close to bridleways. However he later stated that he would remove his objection if mitigating

Community Paths officer
(Siobhan Vincent)

measures (permissive routes and improvements to existing network) were agreed by way of conditions or a Section 106 agreement.

Given that Andrew Gwillam from the County Council has been in discussions with the applicant with regards to the existing rights of way and the provision of new rights of way, wished to echo his comments, to avoid any conflicting advice.

Other Local Authorities

Bedfordshire County Council

Summary of responses from different officer:

Ecology Officer - No objection.

Landscape Enhancement Officer – Overall positive response, request for additional information.

Regeneration & Sustainability Officer – Supportive comments.

Economic Growth Manager – Supportive comments.

North Herts District Council

The matter was discussed by this Council's Planning Committee at its meeting on the evening of the 23rd April 2009. Following some debate the Committee resolved to endorse the following response on behalf of this Council:

1. The North Hertfordshire District Council recommends that the determining authority consult the Parish Council's at Hinxworth, Ashwell and Newnham as well as the Radwell Parish Meeting.

2. The North Hertfordshire District Council would draw the determining authority's attention to the review of the East of England Plan and the possible identification of an area north of Bedford, St Neots and Cambridge as an area of "likely

concentration for onshore wind”.

3. The North Hertfordshire District Council would draw the determining authority’s attention to emerging issues regarding the adequacy of ETSU-R-97 (noise) in respect of the larger turbines such as those specified in the Langford application.

Emphasis that this Council’s comments on the Langford scheme were offered with the intention to raise awareness and are based on the experience of dealing with the Weston scheme. They are not intended to be an indication of objection and CBC are invited to attribute to them what weight is deemed appropriate in the circumstances. No objection.
No comments received.

Bedford Borough Council
South Cambs District Council

Aviation

National Air Traffic Services (NATS)/
NATS (En Route) Public Limited
Company (NERL)
Civil Aviation Authority

2 letters were received from NERL, the second confirming that they have no safeguarding objection to the proposal. Highlighted the need to consult with Luton and Cranfield Airports, Shuttleworth/Old Warden Aerodrome, NATS and the MOD. No objection.

Ministry Of Defence - Defence Estate
(Ops North)
London Luton Airport Operations Ltd

No objection provided that NERL have given approval.

Cranfield Airport

Object

The application site is within their safeguarded area and has the potential to compromise the safety of Cranfield Airport for aviation purposes.

Shuttleworth Collection

Reference to future radar proposals at the airport.

Object

Part of the application site is site is within their safeguarded area. There would be a risk to aircraft and persons.

RAF Henlow

No objection.

Telecommunication

Home Office

No comments received (original letter returned in post for 2 different addresses).

National Telecommunications Limited
Wind Farm Site Clearances (Ofcom)
Central Networks (E-on)

No comments received.
No comments received.
The area is not covered by Central Networks and they therefore do not comment.

Arqiva (formerly Crown Castle UK Ltd)

Object

The development has the potential to severely disrupt services currently provided to the local area around the Kimpton relay station.

One2One

No comments received.

BT Cellnet Limited

No comments received.

Orange

No comments received.

Virgin Mobile

No comments received.

Cable & Wireless

Original unopened letter returned in post and alternative address suggested. No comments received.

O2 UK

No comments received.

T-Mobile (UK) Limited

2 letters were received, the first objecting to the position of turbine 3.

The second letter confirmed that there is no objection, subject to any mitigation works required to their links as a result of this development will be at the developer's cost. No comments received.

Vodafone Ltd

No objection.

The Joint Radio Company Ltd

No comments received (original unopened letter returned in post).

Radio Solutions

EDF Connections

No comments received.

Landscape/ Visual

Garden History Society (GHS)

Object

2 letters were received from the Garden History Society. The second was in response to the additional report, 'Biggleswade Wind Farm – Consideration of

Consultee Responses from English Heritage, The Garden History Society, Bedfordshire Gardens Trust'

The Garden History Society acknowledges the Statement's assessment that outside a 10km radius 'the effects of the proposed development are considered to be of minor to no significance' and would ask to see evidence to back this.

The Society also acknowledges the Statement's assessment of the effect of the proposed development on the setting of the parks and gardens within 10km as being only 'moderate/minor adverse', 'minor adverse' or 'minor adverse to none'. Again, the Society would ask for evidence to back this assessment.

In the meantime, the Garden History Society continues to object to this proposal.

Bedfordshire Garden Trust

Object

The ES mentions the 14 Registered Parks and Gardens within 25km of the proposed turbines. There are also Locally Important parks and gardens within this radius and the ES does not consider the impact on much of these parks.

English Heritage

Two letters were received from English Heritage.

The first noted that there are numerous listed buildings within the surrounding area and several scheduled ancient monuments, registered historic parks and gardens and conservation areas.

Due to the height of the turbines, and the number proposed, they would be highly visible within the landscape. EH is particularly concerned about the impact on Astwick and the church at Edworth. Request for further information and for the Environmental Statement to be expanded to

fully consider the impact of the development on the cultural heritage.

They have concerns regarding impact on Astwick Conservation Area, Astwick Bury Moated Site and associated medieval earthworks and the church at Edworth.

The second letter noted that English Heritage continue to have concerns regarding impact on Astwick Conservation Area, Astwick Bury Moated Site and associated medieval earthworks and the church at Edworth.

Request further consideration either by the provision of additional photomontages and wireframe views and/or by a more detailed analysis.

Lack of detailed analysis on certain sites. Given the scale of the development it would affect the setting of listed buildings across a wide area of the landscape, including the churches at Edworth and Astwick.

Continue to have concerns regarding the impact of the development on the sites identified above and the cumulative impact of the development on the cultural heritage. Numerous letters were received from the CPRE, some in response to correspondence with the agent.

Campaign to Protect Rural England
Bedfordshire (CPRE)

They have made numerous comments on the scheme and have not set out their overall stance, stating that they require additional information.

Chilterns Conservation Board

3 letters were received from the Chilterns Conservation Board. The third was a response to the additional report, 'Examination of Viewpoints in the Chilterns AONB'.

No objection.

Footpaths/ bridleways

Ramblers Association
(Langford and Biggleswade)

If permission is granted then they request that permission subject to the provision of the 2 proposed routes in 'Plan A' as submitted in the CBC Rights of Way comments dated 9.3.09 but with the two routes made public rights of way and not permissive bridleways.

Also request mitigation measures to include a section 106 agreements for works to avoid flooding of the section of Biggleswade BW40 at the A1 underpass by raising the level of the path and making appropriate arrangements for A1 surface water drainage.

British Horse Society (BHS)

Object

The interests and safety of horse riders have not been properly taken into account. The application will significantly impact on the enjoyment of the bridleways affected.

No in accordance with guidance issued by the BHS.

Other

Government Office for the East of
England

Unable to comment as the application may go before the Secretary of State and they would not wish to prejudice her consideration of the planning issues involved.

East of England Development Agency
Highways Agency

Support the application.
2 letters were received from the Highways Agency, the second giving some clarification in response to correspondence from the agent. They raise no objection.

Network Rail
Royal Society for the Protection of
Birds
Environment Agency

No objection in principle.
No objection, subject to conditions.

2 letters were received from the Environment Agency, the second giving some clarification in response to correspondence from the agent

Natural England	No objection, subject to conditions. 2 letters were received from Natural England, the second in response to correspondence from the agent.
Anglian Water Services Ltd	No objection, subject to the moving of turbine 7 and also subject to conditions. No objection, provided that there is no piling work for the installation of the turbines.
Ivel and Ouse Countryside Project Bedfordshire and River Ivel Internal Drainage Board	No comments received. No objection, subject to conditions.

REPRESENTATIONS – 10 TURBINES

Town/ Parish Councils (in alphabetical order)

Ashwell Parish Council	No comments received. Previously noted that it is the current policy of Ashwell Parish Council to comment on planning applications that are outside the parish.
Astwick Parish Council Biggleswade Town Council	No comments received. It was RESOLVED that the Town Council OBJECT to this planning application on the grounds of the noise level of the turbines and the impact on the environment.
Caldecote & Newnham Parish Council Clifton Parish Council	No comments received. Object

2 letters were received, the second in response to correspondence with the agent.

Both letters stated an objection.

1st response

Clifton Parish Council has considered the amendment to Planning Application MB/09/00118/FULL and by a majority wish to object on the grounds that:

- reducing the number of turbines will do nothing to solve the fundamental problem that the turbines will be visible for up to 30 miles.

- The site is still too close to housing
- Has a wind map been produced showing the suitability and sustainability for this area?
- Wind is not a constant source meaning that even in the most suitable locations wind turbines do not always produce maximum output. An estimate of maximum efficiency is given but there is no mention of worst case scenario.
- There is no commitment to continue to use the land for farming and there ought to be. It is as essential that every effort is made to retain every acre of farm land as it is to find alternative energy source.
- No mention is made of whether this area being or not being in a migration route.

2nd response

In response to my Council's comments on the planning application for a wind farm adjacent to Langford village, addressed to Central Bedfordshire Council, I have received an email from Peter Hinson, C.Eng (the planning agent for the applicant) in which he asks the Council to reconsider its comments. The above has now been considered by my Council and I relay its comments as follows:

1. Visibility.

My Council acknowledges the applicant's contention that Central Bedfordshire Council is committed to wind power as part of its strategies for sustainable energy sources. However, in addition to choosing the cost effectively productive site my Council contends that visibility impact on adjoining communities cannot be ignored. Peter Hinson admits that the Wind Farm will blight the landscape for up to 30 miles but appears to disregard this objection as he states that

the A1 corridor around Biggleswade is already untidy. However it should be remembered that Langford is situated not in the A1 corridor but in the Ivel Valley, a key conservation and recreational area for this part of Central Bedfordshire. The Parish Council also acknowledges that the visibility impact has more relevance to Langford. Nevertheless there is nothing in current planning legislation that disallows my Council from making this comment.

2. Close to Housing.

My Council is fully aware of the distance from the proposed wind farm. However, it has been asked for its views in order that the application can be properly considered by Central Bedfordshire Council; and again there is nothing in planning legislation that prevents it from making this comment. Naturally, it concedes that should Langford be supportive of the closeness of the development, then its own views on this issue could very well pale into insignificance as far as the deciding statutory body is concerned.

My Council notes Henlow Parish Council's views on this point.

3. Wind Map.

My Council notes the applicant's observations on your Council's obligations, but my Council is not convinced that the site under consideration has been properly assessed as the most efficient site to provide maximum output and that that output can be used to its maximum efficiency.

4. Efficiency.

Naturally my Council is aware of the variations in the wind power locally. That is why the comments were made. It is also aware of the growing number of wind farms in this country, but it does contest that all are reliable and efficient. There are cited cases of wind farms failing to achieve satisfactory

efficiency, as there are cases of “shut downs”, and the consequential payment to the wind farm operators. This is of course the opposite of coal and gas operations that have to pay the National Grid if they do not supply. In the current Government, my Council contends that proper and serious consideration has to be given, not only to the electricity production efficiency, but also to the financial efficiency of the proposed site.

5. Commitment to Farming.

Naturally my Council is pleased to see the guaranteed future commitment to farming.

6. Migration.

In the light of recent reports about a change of heart by the RSPB regards the effects of wind turbines on birds, especially raptors; my Council asks that further consultation take place with that body on the effects on the recent influx of red kites and other raptors in the area.

My Council reiterates its objection to the application.

No objection.

No comments received.

The Members unanimously agreed to re-state the comments made on 23rd February 2009 on application 09/00118/FULL: Land to the North of Edworth Road, Langford: Erection of 16no Wind Turbines, 2 control buildings and monitoring mast. Provision of associated hardstanding areas and on-site track accesses – *RESOLVED: “As a Council we are in favour of renewable energy and the proposed development will not have a negative impact on the residents of Henlow. We therefore have NO OBJECTION to the application.”*

No comments received. (Didn't previously object to 16 although some concern was raised about the possibility of the turbines interfering with the signal from the Sandy Television transmitter and they asked for

Dunton Parish Council
Edworth Parish Meeting
Henlow Parish Council

Hinxworth Parish Council

Langford Parish Council

assurances that if there is a problem then the applicants will take remedial action).

The response included a detailed response to the application in the form of a report. The executive summary is given below and the full report has been appended to the committee report.

Executive Summary

The Parish Council has consulted widely and conscientiously with its residents, neighbours and stakeholders and unanimously and rigorously objects to this proposal. Construction on this scale will destroy the village landscape forever and adversely impact the lives of those 4000 people who reside there. It is in total conflict with the area development plan and is a proposal without merit or precedent which must be put aside without any further waste of public resources.

Update July 2010

The revised application does nothing to change our community's total rejection of this proposal. This view has hardened considerably as more and more data becomes available on the risks of such enormous structures being placed so near to where we live and where our children grow up.

No objection.

The comments of the Old Warden Parish Council on this Planning Application are as follows:

1) Great care must be taken to determine that this development can make a worthwhile contribution to the Nation's energy needs. There appears to be a strong correlation of wind strengths across the whole country (Lands End to John o' Groats) so it is likely that all wind-turbine farms will produce power at the same time and that this will frequently

Northill Parish Council
Old Warden Parish Council

be in times of low demand. Because the power cannot, at present, be stored there will be increasing payments made to the plant owners to shut-down their turbines until the demand is higher. Conversely, there will be many times when the wind-turbines will not be able to generate power to meet a high demand, so we cannot avoid running gas or coal powered plant at very low and inefficient power levels. So this is a good time to ask whether we should build small wind power installations when many large installations are being built or planned.

2) If it is decided that there is National Grid need for this development to take place, then care must be taken to ensure that the consequential costs of the development do not fall disproportionately on those living near it. We accept that all the estimates of the local impact of, for example, noise are made in good faith and using the best available methods, but experience frequently shows that outcomes are different to predications. We ask that the Developers give a firm, legally-binding undertaking that they will fully compensate anyone suffering any loss e.g. property values as a result of this development. As part of this agreement a competent and independent body immediately should be identified to assess any future claims and to set the appropriate compensation. If the Developers have faith in their predictions they should believe that they take no risk in agreeing to this.

3) There must be a strong possibility that the Nation will come to believe that wind-turbines were not a good idea and should be abandoned. The Developers should be asked for a firm guarantee that if and when this installation falls into disuse they will remove all their equipment and return the land to its current state at no cost to the Nation.

Radwell PC
Shefford Town Council
Southill Parish Council

4) Anyone making decisions on the development of wind-turbine farms must ask themselves whether they would buy one of the nearby houses.

No comments received.

No objection.

No objection.

Nearby residents

Objection letters

At the time of writing, 301 letters of objection have been received in response to the scheme for 10 turbines. Again, the number of letters received does not represent the number of people objecting as some people wrote more than once.

263 of the letters were from addresses in Langford (roughly 87%). 19 letters were from other addresses within Bedfordshire and a further 19 were from addresses elsewhere in the UK. (Numbers correct at 16.12.10).

The relevant issues are summarised below:

Landscape
character/ Visual
impact

- Visual impact
- Too big
- Eyesores/ugly
- Out of keeping with area
- Alien metallic shapes on horizon
- Disruption to rural setting
- Use of Greenfield land inappropriate (would land be classified as brownfield at end of turbines' lives)/would land be classed as industrial in future
- Industrialise the landscape
- Loss of agricultural land
- Disagree with statements made in the ES
- Famous views/historic landscape will be interrupted/spoilt
- Will be visible for miles around
- Impact on nearby listed buildings
- Photomontages are misleading and do not cover all relevant views
- Some properties will be able to see all the turbines at once
- Although railway has lots of overhead wires etc. it would not provide a barrier to views of the wind farm
- The landscape cannot absorb the moving features
- New roads and control building will also have an impact

Residential
amenity

on views of area

- Turbines removed aren't those closest to dwellings
- Overbearing impact/too close -reference to 2km guidance
- Oppressive features
- Noise data needs to relate to an exact model of turbine
- ETSU-R-97 outdated
- Queries as to background noise measurements
- Queries as to noise report
- Langford has low levels of background noise
- Not enough/correct data has been collected to make calculations
- Continuous drone
- Amplitude modulation
- Night noise
- Additional noise source on top of railway and aircraft overhead
- Shadow flicker – from sun and moon
- Human Rights (a person's effective enjoyment of right to respect for home and private life)
- Will destroy village life as people move away due to the turbines
- New reports of residents being forced from their homes in other places

Health and safety

- Proximity to village
- Low frequency noise
- Impact on school – will affect learning
- News reports of pieces falling off the turbines and causing injury
- Headaches/sleep deprivation/high blood pressure/stress/anxiety etc.
- Danger of turbines falling over
- Wind turbine syndrome
- Lightning strikes
- Turbines setting on fire
- Ice build up on the blades can be thrown to the ground at speed
- Impact on people suffering from existing conditions
- Effect on children
- Human health effects may take years to emerge as a pattern
- No way of calculating potential risks to health
- Distraction to drivers on the A1
- Effect on local flora and fauna

Wildlife

- Impact on biodiversity/lots of wildlife in area (badgers, foxes, deer etc.)
 - Will cause death to bats
 - Bird strike
 - Rare birds will be affected
 - Disruption to hedgerows
 - Raptor/bat populations will suffer
 - Impact on pets
 - Ruin tranquillity of area for walkers etc.
 - Ruin enjoyment of the bridleways/horses will be scared/will bolt
 - Access to public footpaths will be severely affected during construction/operation
 - Will disrupt local peoples' ability to walk, run, horse ride or cycle on the site
 - Ice build up on the blades can be thrown to the ground at speed
- Footpaths/
bridleways
- Impact on radar – military/commercial
 - Impact on aircraft - RAF Henlow/ Shuttleworth
 - Gliders
 - Hot air balloons
- Aviation
- TV reception
 - Mobile phone reception
 - Radio signals in area (for example from Water Tower)
- Communications
- Small number of employment opportunities/doesn't really benefit local economy
 - Traffic generation
 - Lengthy construction period during which there will be disruption to village.
 - Don't want lorries driving through village
 - Current road infrastructure is unsuitable
 - Edworth Road/access to site would be difficult
 - Construction might go on through the night causing more disruption
 - Parking for construction workers might congest nearby residential streets
- Construction period
- Contrary to planning policy
 - No recommendations for this type of development in Langford in the LDF
 - Disagree with statements made in the ES/ revised documents
 - Will attract sightseers which could be dangerous (nowhere to park etc.)/ East Road will be used to get to the site by visitors
 - Archaeology concerns
- Other

- Will prevent land to East of Langford being earmarked for housing in the future
- Will railway operators etc. be informed
- Impact on local hydrology/aquifers as a result of concrete foundations
- Flooding due to concrete foundations
- What will happen to them in 20 years

None planning matters

- Efficiency/ economic viability
- Devalue nearby properties
- Cash-earning opportunity for the developer
- Land-owners are only benefactors
- Precedent/would open up area to further development of this type
- People outside Langford/the District are being allowed to support the proposal
- Local MP/Paris Council supports the opposition to the proposal
- Council owns some of the land – conflict of interests
- Applying for 16 turbines and later reducing it to 10 is a ploy
- Waste of money
- No advantages for the village, only disadvantages
- Not windy enough
- They should be built elsewhere/offshore
- Should build a power station instead
- Must find alternative ways in which to save the planet
- Technology is too new
- No other wind farms so close to settlements
- Calling it Biggleswade Wind Farm is misleading as the impact is on Langford
- Langford residents are amongst the highest Council-tax payers so unfair to affect them.
- Don't want Langford to be a test case
- Wish to see details of meetings/expenses etc, incurred by Council in reaching conclusion

Support letters

At the time of writing, 45 letters of **support** have been received in response to the revised scheme for 10 turbines.

Only 4 of the letters were from addresses within Langford (roughly 9%). The vast majority were from addresses within Bedfordshire (37/ 82%). A further 4 were from addresses elsewhere in the UK. (Numbers correct at 16.12.10).

The main points are summarised below:

- Must support renewable energy schemes
- Visual impact is subjective
- Area is not Area of Outstanding Natural Beauty etc.
- Create local jobs
- Support by RSPB for wind farms means impact on birds must be acceptable
- Tourist attraction for this part of Bedfordshire
- Money would be good for landowners (including the Council)
- Clean source of power
- Must reduce carbon based fuel usage
- Benefits to world are more important than effects on Langford (from a Langford resident)
- Can be seen as beautiful/elegant structures
- The turbines in Cornwall do not spoil the landscape and Cornwall is more beautiful than Bedfordshire
- Would be good for Central Bedfordshire to lead the way
- Every bit of power that could be generated is beneficial
- Climate change is a problem that will not go away
- Must look after what nature has provided us
- After the initial construction costs, wind is free
- The rest of Europe has lots of onshore wind farms, Britain should follow
- Combat the damage being caused by coal power stations

CONSULTATION/ PUBLICITY RESPONSES – 10 TURBINES

Petition

A petition against the proposal with over 1300 signatures has also been received by the Council. The petition notes the following:

We the undersigned are most strongly opposed to the new revised scheme for 10 wind turbines (ref MB/09/00118/FULL). THESE WOULD STILL BE UNACCEPTABLY CLOSE TO THE VILLAGE OF LANGFORD AND WOULD POSE DANGERS AND NUISANCES TO THE DETRIMENT OF THE QUALITY OF LIFE OF ALL WHO LIVE HERE. WE THEREFORE URGE THAT THE APPLICATION BE REFUSED.

Publicity dates

Site notices posted	30.6.10, 9.7.10
Biggleswade Chronicle	18.6.10

Internal

Local Development Framework Team	Guidance given on the current policy context.
Heritage and Design Team	<p>Reduced harm due to reduction in number of turbines.</p> <p>New advice in PPS5 which has been published since the original submission of the application.</p> <p>Policy HE10 – must preserve those elements of the setting that make a positive contribution.</p> <p>Policy HE1 – heritage assets and climate change. There is a presumption in favour of conserving and preserving heritage assets but weight must be given to the need to address climate change.</p> <p>Overall, the assessment of harm must be weighed against the wider benefits of the application. The greater the negative impact and the more significant the heritage asset, the greater the benefits must be to justify granting planning permission.</p>
Landscape Consultant	<p>The reduced scheme offers considerable landscape and visual amenity benefits over the 16 turbine scheme.</p> <p>The success of the scheme in landscape and visual terms may also depend on the effectiveness of associated landscape plantings.</p>
Highways Team	<p>(Detailed comments are in the full report). Repeat previous comments (No objection, subject to conditions), plus the suggestion of an extra condition.</p>
Public Protection Team - noise	<p>Object</p> <p>A specialist noise consultant was commissioned to assess the proposal. Their analysis shows that higher levels of noise will arise than the information provided in the supplementary ES shows. The ETSU-R-</p>

97 guideline values
will be exceeded at a number of dwellings.

Also, not all likely significant forms of impact by noise have been adequately assessed, in particular the occurrence of excess Amplitude Modulation and the problem of protected facades facing wind farms in areas of high traffic noise.

Recommend refusal of the development. This is based on the grounds the development will lead to excessive noise impact and does not meet the limits set in ETSUR-97. Refusal is also recommended as there is not sufficient information to formulate appropriate noise limits to enable the protection of residential amenity. (Detailed comments are in the full report).

Archaeological officer
Rights of Way officer
Community Paths Officer

No objection subject to a condition.

No additional comments received.

No comments received. It was previously noted that they would echo the comments of the Rights of Way officer.

Ecology officer

Agree with the revised report's findings that the proposed wind farm will have sub significant effects on the ecological receptors. Suggestions with regards to the loss of hedgerows.

Other Local Authorities

North Herts District Council

Nothing to add given the number of turbines is being reduced from 16 to 10. If this remains the case I do not see any need to comment further other than to reiterate the views previously expressed.

(previously made general comments in relation to North Herts District Council's experience of dealing with a wind turbine).

Bedford Borough Council

No comments received. (Didn't previously object to 10).

South Cambs District Council

No comments received.

Aviation

National Air Traffic Services (NATS)/ NATS (En Route) Public Limited Company (NERL) Civil Aviation Authority	No safeguarding objection to the proposal. Repeat previous comments. (Highlighted the need to consult with Luton and Cranfield Airports, Shuttleworth/Old Warden Aerodrome, NATS and the MOD).
Ministry Of Defence - Defence Estate (Ops North) London Luton Airport Operations Ltd	No objection. 2 letters were received, the 2 nd clarifying that they have no objection.
Cranfield Airport	Continue to object . Request that the developer completes a full radar impact assessment.
Shuttleworth Collection	No comments received. (Previously objected to 16).
RAF Henlow	No comments received. (Didn't previously object to 16).

Telecommunication

Home Office (Direct Communications Unit)	The Home Office Scientific Branch and the Home Officer Property Group have no property in the area specified.
National Telecommunications Limited	No comments received.
Wind Farm Site Clearances (Ofcom)	No comments received.
Central Networks	No comments received. (Previously advised that the area is not covered by Central Networks and they therefore did not comment).
Arqiva (formerly Crown Castle UK Ltd)	No objection.
One2One	No comments received.
BT Cellnet Limited	No comments received.
Orange	There are no Orange microwave links affected by the application.
Virgin Mobile	No comments received.
Cable & Wireless	No comments received.
O2 UK	No comments received.
T-Mobile (UK) Limited	No comments received (Didn't previously object to 16, subject to any mitigation works required to their links as a result of this development will be at the developer's cost).

Vodafone Ltd
The Joint Radio Company Ltd
Radio solutions
EDF Connections

No comments received.
No objection.
No comments received.
No comments received.

Landscape/ Visual

Garden History Society
Bedfordshire Garden Trust
English Heritage
CPRE Bedfordshire

No comments received. (Previously objected to 16)
No comments received. (Previously objected to 16)
No objection.
Repeat previous comments
(They made numerous comments and did not set out their overall stance, stating that they required additional information).

Chilterns Conservation Board

Do not believe that the applicant had adequately demonstrated a benefit to the local community from this proposal, and some elements of the submission are misleading.
No comment on the revisions.

Footpaths/ bridleways

Ramblers Association
(Langford and Biggleswade)

Repeat previous comments, requesting that the two proposed routes in Plan A are made public bridleways and not permissive bridleways.

British Horse Society

On this basis, no objection.
No comments received. (Previously objected to 16)

Other

Government Office for the East of England

Unable to comment as the application may go before the Secretary of State and they would not wish to prejudice her consideration of the planning issues involved.

East of England Development Agency

Repeat previous comments. (Support the application).

Highways Agency
Network Rail

Repeat previous comments (No objection).
Repeat previous comments (No objection in principle but would request that Turbine 7 is

Royal Society for the Protection of Birds	moved further from the sight line of the level crossing to minimise the potential for distraction for level crossing users).
Environment Agency	Repeat previous comments (No objection, subject to conditions).
Natural England	Repeat previous comments (No objection, subject to conditions).
Anglian Water Services Ltd	Repeat previous comments (No objection). Suggested conditions.
Ivel and Ouse Countryside Project	No objection subject to a note to the applicant.
Bedfordshire and River Ivel Internal Drainage Board	No comments received.
	No further comments to add to the previous comments (No objection, subject to conditions).

DETERMINING ISSUES

The main considerations of the application are;

1. Planning policy and the principle of development
2. The impact of the development upon landscape character
3. The effect on the residential amenity of nearby residents
4. The impact on local ecology
5. The impact on hydrology/ geology/ flood risk/ contamination
6. Cultural heritage and archaeology considerations.
7. Telecommunication considerations
8. Aviation considerations
9. Socio-economic considerations
10. The effects upon the enjoyment of the countryside by members of the public, including those using local rights of way
11. Traffic generation and access considerations
12. Construction and Decommissioning phases
13. Any other implications

CONSIDERATIONS

1. **Planning policy and the principle of development**
National policy

The Government's main planning policy regarding renewable energy is found within Planning Policy Statements, particularly Planning Policy Statement 22 *Renewable Energy* and its companion guide *Planning for Renewable Energy*. It states that the development of renewable energy, alongside improvements in energy efficiency and the development of combined heat and power will make a vital contribution to the aim of reducing carbon dioxide emissions, and

to maintain reliable and competitive energy supplies. The PPS confirms the Government's target to generate 10% of UK electricity from renewable energy sources by 2010, and the aspiration to double that figure to 20% by 2020. It also suggests that still more renewable energy will be needed beyond that date. The document goes on to highlight that increased development of renewable energy resources is vital to facilitating the delivery of the Government's commitments on both climate change and renewable energy.

It is a key principle of PPS22 that renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily. Moreover, local development documents should contain policies designed to promote and encourage, rather than restrict, the development of renewable energy resources. The guidance states that the wider 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. The value of small scale renewable energy projects is highlighted, as they 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.

PPS22 states that local landscape and local nature conservation designations should not be used in themselves to refuse planning permission for renewable energy developments. Planning applications for renewable energy developments in such areas should be assessed against criteria based policies set out in local development documents. As most renewable energy resources can only be developed where the resource exists and where economically feasible, local planning authorities should not use a sequential approach in the consideration of renewable energy projects.

In terms of noise, PPS22 advises local planning authorities to ensure that renewable energy developments have been located and designed in such a way to minimise increases in ambient noise levels. It adds that the 1997 report by ETSU for the Department of Trade and Industry should be used to assess and rate noise from wind energy development.

The companion guide for PPS22 gives detailed advice to local planning authorities handling planning applications for renewable energy projects. It confirms that if the Government's targets are to be met, policy support for renewable energy schemes will need to be backed up by development control decisions.

PPS1 *Delivering Sustainable Development* outlines that sustainable development is the core principle which underpins planning. One of the key

principles of which should be applied to achieve sustainable development is ensuring that development plans contribute to global sustainability by addressing the causes and potential impacts of climate change through policies which reduce energy use, reduce emissions, promote the development of renewable energy sources, and take climate change impacts into account in the location and design of development. At the same time, the Government is committed to protecting and enhancing the quality of the natural environment.

PPS5 *Planning for the Historic Environment* discusses heritage assets, both registered and unregistered. Policy HE1 relates specifically to climate change. The policy notes that where conflict between climate change objectives and the conservation of heritage assets is unavoidable, the public benefit of mitigating the effects of climate change should be weighed against any harm to the heritage assets and their significance.

With regards to designated heritage assets, Policy HE9 notes that there should be a presumption in favour of their conservation, with the more significant the asset, the greater the presumption in favour of conservation. If there is to be any harm to a designated heritage asset, the local authority must weight the public benefit of the proposal against the harm.

Policy HE10 relates specifically to the setting of heritage assets. It notes that local authorities should treat favourably applications that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset. When considering applications that do not do this, local planning authorities should weigh any such harm against the wider benefits of the application. The greater the negative impact or the significance of the heritage asset, the greater the benefits that will be needed to justify approval.

The Historic Environment Planning Practice Guide, which accompanies PPS5 makes specific reference to wind farms. It notes that proposals for large schemes that have a positive role to play in the mitigation of climate change and the delivery of energy security, but which may impact on the significance of a heritage asset, such as a historic landscape, should be carefully considered by the developer and planning authority with a view to minimising or eliminating the impact on the asset.

PPS7 *Sustainable Development in Rural Areas* states the Government's objectives for rural areas are to raise the quality of life and the environment in rural areas, to promote more sustainable patterns of development, promote the development of the English regions by improving their economic performance so that all are able to reach their full potential, and to promote sustainable and diverse agricultural sectors. Of relevance to this application is the advice to local planning authorities in preparing policies for Local

Development Documents and determining planning applications to provide for the sensitive exploitation of renewable energy sources in accordance with the policies set out in PPS22.

PPS9 *Biodiversity and Geological Conservation* sets out the Government's national policies on the protection of biodiversity and geological conservation through the planning system. The document sets out the Government's vision for conserving and enhancing biological diversity in England together with a programme of work to achieve this. It includes the broad aim that planning, construction, development and regeneration should have minimal impacts on biodiversity and enhance it wherever possible. Central to the above vision are the objectives of promoting sustainable development, conserving, enhancing and restoring the diversity of England's wildlife and geology, contributing to rural renewal and urban renaissance

PPG24 *Planning and Noise* highlights that noise can have a significant effect on the environment and on the quality of life enjoyed by communities and individuals. The aim of the guidance is to provide advice on how the planning system can be used to minimise the adverse impact of noise without placing unreasonable restrictions on development or adding unduly to the costs and administrative burdens of business.

PPS 25 *Development and Flood Risk* seeks to ensure that the potential for flooding is taken into account at all stages of the planning process avoiding inappropriate development in areas at risk of flooding and to direct development away from areas of highest risk.

There are several other policy documents issued by the Government such as the *Energy White Paper, Meeting the Challenge May 2007*, and *The UK Renewable Energy Strategy 2009*, which set out in unequivocal terms the seriousness of climate change and its potential effects, the importance of the need to cut carbon dioxide emissions, and the commitment of the Government to the increase in renewable energy production. The strategy confirms that wind power both onshore and offshore has an important role to play in the production of renewable energy in this country.

The EU Renewable Energy Directive requires the UK Government to ensure that at least 15% of energy consumed comes from renewable sources by 2020, whereas only 3% of consumed energy currently comes from renewable sources.

More recently the current Government has set out in equally clear terms its policy commitments on climate change and renewable energy. *The Coalition: Our programme for government* and the *Annual Energy Statement DECC Departmental Memorandum* highlight that climate change is one of the gravest threats we face, and it gives support for the creation of new green

jobs and technologies. The latter document states, "*This Government is committed to being the greenest Government ever, which includes a firm commitment to renewable energy*". Of particular note is the fact that the Committee on Climate Change has been asked to provide advice on the scope for a more ambitious target for renewables, and the Government confirms that a renewable delivery plan will be published to drive faster deployment through the decade.

The Government has recently published a revised draft Overarching National Policy Statement (NPS) for Energy (EN1) which is aimed at providing advice in the main to the Infrastructure Planning Commission on major energy infrastructure which is defined in terms of electric generation as schemes generating more than 50 megawatts of power. Accompanying EN1 is Revised Draft National Policy Statement for Renewable Energy Infrastructure (EN3), which gives detailed advice to the IPC on national significant renewable energy infrastructure. The NPS also states that the guidance may be helpful to local planning authorities in preparing local impact reports, and is likely to be a material consideration in decision making on relevant applications that fall under the Town & Country Planning Act 1990. Much of the guidance contained in EN3 is similar in nature to that contained in PPS22 and its companion guide.

The weight given to both NPSs is limited as they are both draft documents. In addition, the generating capacity of this proposal will be approximately 20 megawatts which is significantly below the 50 megawatt threshold set out in the both documents.

Regional Policy

The Regional Spatial Strategy (RSS) for the Eastern Region, known as the East of England Plan, was revoked by the Government in July this year under s79(6) of the Local Democracy Economic Development and Construction Act 2009. However, as a result of a legal challenge the High Court determined on 10th November 2010 that the action of the Government was judged to be unlawful and RSSs were reinstated as part of the development plan for the purpose of determining planning applications. The Government immediately announced that its intention to abolish RSSs within the Localism Bill was a material planning consideration which in practice would lessen the weight given to the RSS. In a fresh legal challenge the High Court put a temporary interim block on the Government's claim that its intention to abolish RSSs should be viewed as a material consideration in planning decisions. The current position is that until the outcome of this latest legal challenge, the Department of Communities and Local Government is advising decision makers to consider whether the existence of this challenge, and the basis of it, affects the significance and weight which they judge may be given to the Secretary of State's statements. It is considered that at the current time the

East of England Plan does carry weight in the determination of this application and is currently part of the development plan.

In common with Government advice, the East of England Plan supports the development of new facilities for renewable power generation. Policy ENG2 set a target that by 2010, 10% of the region's energy and by 2020, 17% of the region's energy should come from renewable energy sources. These targets exclude energy from offshore wind, and are subject to meeting European and international obligations to protect wildlife, including migratory birds, and to revision and development through the review of the RSS.

Central Bedfordshire Core Strategy and Development Management Policies

Contained within the Council's strategy for climate change is the intention to enable an increase in local renewable energy production, both large and small scale.

Policy CS13 (Climate Change) gives the Council's commitment to the use of renewable energy options to provide energy requirements of new development including on-site and near-site low carbon technologies. The policy confirms that the Council will consider positively energy generating proposals with low carbon impact.

Policy CS14 (High Quality Development) states that the Council will require development to be of the highest quality by respecting local context, the varied character and the local distinctiveness of Mid Bedfordshire's places, spaces and buildings in design and employs a range of urban design tools including urban design frameworks, design briefs and design codes to fulfill this undertaking.

Policy CS15 (Heritage) seeks to protect, conserve and enhance the district's heritage including its Listed Buildings, Scheduled Ancient Monuments, Conservation Areas, Registered Parks and Gardens and archaeology and their settings.

Of particular relevance to this proposal is Policy CS16 (Landscape and Woodland) which, amongst other things, sets out to protect, conserve and enhance the Chilterns Area of Outstanding Natural Beauty, conserve and enhance the varied countryside character and local distinctiveness in accordance with the findings of the Mid Bedfordshire Landscape Character Assessment, resist development where it will have an adverse effect on important landscape features or highly sensitive landscapes, and require development to enhance landscapes of lesser quality in accordance with the Landscape Character Assessment.

Policy CS18 (Biodiversity and Geological Conservation) states that the

Council will support the designation, management, and protection of biodiversity and geology including those local priority habitats and species identified in the Local Biodiversity Action Plan. Moreover, it supports the maintenance and enhancement of habitats, and the identification of opportunities to create buffer zones and restore and repair fragmented and isolated habitats to form biodiversity networks. Development that would fragment or prejudice the biodiversity network will not be permitted.

Policy DM1 (Renewable Energy) states the following: *“In line with Government advice, any proposals for new renewable generating schemes, or those with low carbon impact will be considered favorably”*.

Outside of the Chiltern’s Area of Outstanding Natural Beauty, applications which may have an impact will be considered against the findings of the Landscape Character Assessment. The supporting text to policy DM1 goes on to say that only in areas of high sensitivity where there is an unacceptable impact on the landscape will this be a material consideration upon which an application may be refused. Noise and traffic resulting from a scheme will also be factors the Council will take into account when determining planning applications.

Policy DM1 is set out in full below:

The Council will consider favorably proposals for renewable energy installations.

Proposals should satisfy the following criteria:

- *Have good accessibility to the transport network;*
- *Not be harmful to residential amenity, including noise and visual amenity;*
- *Be located and designed so as not to compromise the landscape and scenic beauty of the Chilterns AONB;*
- *In other areas identified through the Landscape Character Assessment as having high sensitivity, be located and designed so as to respect the character of the landscape.*

Proposals for all new development of more than 10 dwellings or 1000 square metres of non-residential buildings should contribute to renewable energy targets by incorporating on-site or near-site renewable or low carbon technology energy generation. Developments should achieve 10% or more of their own energy requirements through such sources, unless it can be demonstrated that this would be impracticable or unviable.

In common with Government advice, it can be seen that there is strong support within the Council’s Core Strategy to the principle of providing new renewable energy installations.

In order to ensure that all new development is of a high quality, Policy DM3 (High Quality Development) states that all proposals shall be appropriate in scale and design to their setting, contribute positively to creating a sense of place and respect local distinctiveness through design and use of materials, use land and energy efficiently, respect the amenities of surrounding properties, enhance community safety, comply with the current guidance on noise, waste management, vibration, odour, water, light, airborne pollution, provide adequate areas for parking and servicing, and respect and complement the context and setting of all historically sensitive sites particularly those that are designated.

The relevant part of Policy DM14 (Landscape and Woodland) confirms that planning applications are assessed against the impact the proposed development will have on the landscape, whether positive or negative. The Landscape Character Assessment will be used to determine the sensitivity of the landscape and the likely impact. Any proposals that have an unacceptable impact on the landscape quality of the area will be refused.

Policy DM15 (Biodiversity) highlights that proposals which are harmful to wildlife, whether habitats or species will be refused.

In considering the relevant guidance, it is clear that there is strong Government support for the expansion of renewable energy. This support extends to both onshore and offshore wind power given the benefits that such schemes have to the reduction of CO₂ emissions. The Environmental Statement accompanying the application estimates that the proposal could displace 42'656 tonnes of carbon dioxide (CO₂), 50 – 400 tonnes of sulphur dioxide (SO₂), 110-210 tonnes of nitrogen oxides (NO_x) per annum. (The variation within these figures is due to the use of emission reduction equipment on some plants.)

Whilst some people have questioned the benefits of wind farms, this is not a relevant consideration in the context of an individual planning application, particularly given the prevailing strong Government support in principle for such schemes. In addition, others have questioned why this particular site has been chosen for the proposal. However, advice contained within the Planning and Climate Change Supplement to PPS1 makes it clear that local planning authorities should not require applicants for energy development to demonstrate either the overall need for renewable energy and its distribution, nor question the energy justification why a proposal for such development must be sited in a particular location. It must also be highlighted that the cost of implementing the scheme, and the period to it showing a net profit are not material planning considerations and are not of relevance to the consideration of the application.

The supportive stance for renewable energy development is repeated within the Council's own adopted Core Strategy and Development Management Policies. Subject to satisfying a number of detailed factors, Policy DM1 confirms that the Council will consider favourably applications for renewable energy installations.

Conclusion (Planning Policy & the Principle of the Development

The above considerations can best be summarised by stating that the principle of allowing any proposal for new renewable energy development is supported strongly by Government guidance and by the Councils own policies. However, the key question for this and any similar proposal is whether it complies with the detailed criteria set out within policy DM1, other relevant Council policies, and Government guidance.

2. The impact of the development upon landscape character

The impact of the proposal on the landscape is one of the most significant issues that must be considered in the determination of the application. Having a total height of 110 metres to blade tip, the proposed wind turbines would inevitably change significantly the character of the site. The key factors to consider are the extent of the landscape impact, and whether that impact is viewed as being acceptable particularly in the context of Policy DM1. The main information that must be considered in judging this issue is the ES, the Mid Bedfordshire District Landscape Character Assessment, and the visual inspections undertaken on and in the areas surrounding the site.

In advising local planning authorities on landscape impact PPS22 states the following:

"Of all renewable technologies, wind turbines are likely to have the greatest visual and landscape effect. However, in assessing planning applications, local authorities should recognise that the impacts on the landscape will vary according to the size and number of turbines and the type of landscape involved and that these impacts may be temporary if conditions are attached to planning permissions which require the future decommissioning of turbines".

Summary of the Environmental Statement (ES)

In preparing the ES, the applicant assessed the existing landscape character and quality of the 30km study area surrounding the site, in order to identify and evaluate the significant environmental considerations for visual impact assessment. The landscape appraisal has been used to determine the capacity of the landscape to withstand change and disturbance, and the assessment identifies various landscape types and awards quality grades to each area based on visual appraisal and analysis of survey data. In addition,

the landscape character assessment determines the sensitivity of the landscape resource and the scale or magnitude of landscape effects. In order to develop significant thresholds it is necessary to classify the sensitivity of the receptors and the magnitude of the change.

The ES contains a map showing an initial Zone of Theoretical Visibility (ZTV) for the proposal, which is used to describe the area over which a development can theoretically be seen from a radius of 30 km. This plan takes no account of existing screening in the landscape such as settlements, buildings, trees or hedgerows, and therefore represents a worse case scenario. A further ZTV map is included in the ES again over a radius of 30 km taking into account the screening of settlements, buildings and vegetation. The latter plan indicates the numbers of turbines theoretically visible within a radius of 10 km, 20 km and 30 km radius. Only those turbines where at least one blade tip is visible have been included in the assessment, and main woodland blocks and built-up areas have been included in the visibility calculation. Even so, the actual impact on the landscape is likely to be less than indicated due to smaller areas of woodland, trees and buildings not being included in the assessment. Whilst it is impossible for a ZTV map to be 100% accurate, it does give a good indication of the wider impact of the proposal on the landscape.

The ZTV map indicates that between 7 to 10 of the turbines would be visible from the overwhelming majority of the areas within a 10 km radius of the site. Inevitably the extent of the impact will reduce as the distance away from the site increases. Between a radius of 10 and 20km away from the site, the wind farm would be visible from far fewer locations mainly to the north east, south west and north west. The ZTV decreases significantly between a radius of 20 to 30km from the site, with very distant views being possible from mainly the east, west and north west.

In total the site measures 5km², and the ES states that land levels reduce gently from 77 metres AOD at Topleys Hill Water Tower which is a prominent landmark just beyond the site area to the south east, to 30 metres AOD at its northern side over a distance of 3 km. Whilst not mentioned in the ES, the land also gently rises from its western boundary with the East Coast Main Line to its eastern side and the A1. The application site is characterised by large fields generally used for arable crops, with a number of ditches and some field boundaries demarcated by hedgerows and trees.

The land immediately adjacent to the railway is flat with the overhead power lines being a prominent feature in the landscape. The railway tracks are on raised surface of about 1 metre relative to adjoining land, and passing trains are clearly visible from the majority of the application site. Power lines on telegraph poles also are located parallel to the railway line in a north-south direction, in parts on both sides of the track. Looking north the buildings on Stratton Business Park are also very prominent in the wider landscape, partly

as a result of their size but also due to the slightly raised land levels in that location. The power lines to the east of the A1 are also clearly visible from the application site. The A1 is located on higher ground, and passing traffic is a visible feature in the landscape along with the sporadic dwellings and farmsteads located alongside. From the A1 to the south of Biggleswade the application site generally slopes gently away to the west. Whilst there are several trees located on the site, the overall character is very much of an agricultural nature with large fields used for growing crops. However, at the same time there are existing negative aspects which detract from the character of the site such as the east coast main line with its overhead gantries, existing power lines on or visible from the site, the A1 with the impact of passing traffic, and also the prominent buildings located at Stratton Business Park.

Mid Bedfordshire District Landscape Character Assessment

In terms of landscape impact, policy DM1 states that the Council will consider favourably proposals for renewable energy production, but for areas identified through the Landscape Character Assessment (LCA) as having high sensitivity, they should be located and designed so as to respect the character of the landscape. With the exception of the other detailed criteria within the policy, the clear objective of the policy is that on sites which are not stated as having high sensitivity, proposals for renewable energy installations will be supported. On sites of high sensitivity there is however a requirement for proposals to respect the character of the landscape. As such, the designation of the site and surrounding land within the Council's LCA is a significant material planning consideration in judging whether the impact on the proposal on the landscape is acceptable.

The application site is contained within LCA 4B Lower Ivel Clay Valley, 5G Dunton Clay Vale and 4C Upper Ivel Clay Vale. Character Area 4B covers the northern part of the site and a large area of land to the west and north west of Biggleswade and encompasses the settlements of Broom, Southill, Upper Caldecote and Beeston. One of the key characteristics of this area is it being a disturbed and fragmented area with the presence of the major road corridor of the A1, large settlements and the mix of land uses giving an urban fringe character. The LCA states that the overall landscape character sensitivity is judged to be moderate. It states "*There is a general lack of distinctive features such as hedgerows, hedgerow trees and water meadows in the area and the A1 trunk road, large scale shelter belts and harsh large scale settlement edges fragment the valley landscape. The River Ivel and associated features such as wetlands, floodplain grassland, and pollarded willows provide a strong sense of place locally and offer the potential for enhancement. These key features are also vulnerable to further fragmentation and loss due to development along road corridors and on the edges of towns.*" Whilst concluding that in visual terms the landscape is considered to have a

moderate sensitivity to change, the LCA goes on to say that: *“The shelter belts, elevated character of the A1 and large scale industrial buildings on the edges of settlements restrict views in the area, however the level topography means that tall structures and large scale buildings are still highly visible and likely to impact on the more sensitive immediate river corridor”*.

Landscape Character Area 5G Dunton Clay Vale covers most of the southern half of the site, and includes the settlements of Edworth, Dunton and a large area of land to the east of Biggleswade. One of the key characteristics of this area is an undulating vale on the eastern edge of the county extending into Cambridgeshire, which is essentially an open arable landscape with limited woodland cover. The LCA judges the overall character and visual sensitivity to be low as the gently undulating landform provides a relatively high degree of containment.

A relatively small part of the site at its south west corner lies within landscape character area 4C Upper Ivel Clay Valley. This landscape area includes the settlements of Astwick, Stotfold, Henlow, Arlesey, Clifton and Shefford. One of the key characteristics of this area is it being a mixed land use predominantly of arable farmland with some pastures along the river courses plus substantial areas of settlement. The overall landscape character and visual sensitivity of this area is stated as moderate. The LCA states that settlements restrict views in the area, however the level of the topography means that tall structures and large scale buildings are still highly visible and likely to impact on the more sensitive immediate river corridor.

No part of the application site lies in an area which the LCA has assessed as having a high sensitivity. As such, the impact on the site itself would not be contrary to Policy DM1. Given the nature of the proposal it is also necessary to consider other adjacent landscape character areas in assessing whether the proposal complies with Policy DM1. The proposal is also likely to be visible from certain points within landscape character areas 1D Cockayne Hatley Clay Farmland to the north east, 6B Mid Greensand ridge to the west, 6C Everton Heath Greensand Ridge to the north, 8D Upper Gravenhurst to Meppershall Clay Hills to the south west, and 10D Fairfield Chalk Farmland to the south.

The landscape character and visual sensitivity of area 1D is stated as being of moderate to high sensitivity, in areas 6B and 6C the landscape character sensitivity is stated as high and the visual sensitivity is considered to be moderate to high, in area 8D the landscape character is viewed as being moderately sensitive and as having a moderate to high visual sensitivity to change, and finally 10B has a moderate to low landscape character, and in visual terms the landscape is considered to have a moderate to low sensitivity to change.

The visual impact of any development reduces over distance. The nearest point of area 1D to the nearest turbine is over 4km, and it is not therefore considered that the proposal would have an adverse impact on the character of this landscape area.

In terms of area 6B its nearest point to the most westerly turbine is also over a distance of 4km. Given the separation between the two points it is not considered that the proposal would have a material impact on landscape area 6B.

Area 6C is located approximately 5km from the nearest turbine and whilst this area includes the elevated land at Sandy Warren, the turbines are likely to be viewed as part of the broader landscape when looking to the south. The views will be from such a distance to ensure that the impact on this area would not be judged as being significant.

At over 5km from the application site it is not considered that landscape area 8D would be materially affected by the proposed wind farm. Landscape area 10D is approximately 4km from the nearest turbine and lies to the north of Letchworth Garden City. The turbines would be visible from this area above the ridgeline to the south of the application site. However, given the separation distances, it is not considered that the impact of the development would be significant on this particular landscape area.

One of the remaining tests set out within Policy DM1 is that renewable energy installations should be located and designed so as not to compromise the landscape and scenic beauty of the Chilterns Area of Outstanding Natural Beauty (AONB). The application site is approximately 12km to the north of the northern section of the AONB which lies to the south-west of Pirton and to the south of Hexton. The ES states that at this distance there may be a minor effect on the northern edge of the AONB, but that professional experience indicates that beyond 12km wind turbines are barely perceptible in the wider landscape and that it is unlikely that the proposed wind farm would have an impact on the natural beauty of the Chilterns AONB. Given the distances involved, it is considered that the conclusions in the ES on this issue are reasonable. Moreover, the Chiltern's Conservation Board have raised no objections to the proposal, and it is not therefore considered that the proposal would have a material impact on the AONB.

It is also necessary for the Council to consider whether there would be a cumulative impact from this proposal and other wind farms in the study area. However, there are no existing wind farms in the study area as defined by the ZTV i.e. within a 30km radius of the application site. As such, it is not considered that there would be any cumulative visual impact as a result of this development.

Assessment of Viewpoints Contained Within the Environmental Statement

The ES contains 18 viewpoints, which are displayed as photomontages showing existing and proposed views of the application site. Viewpoints 1 to 7 are taken in close vicinity of the site, 8 to 15 show the site in a wider context, and 16 to 18 show the site in the wider landscape. The plan appended to this report identifies the location of each viewpoint.

Viewpoint 1 is taken from playing fields, which are accessed via a tunnel under the A1 from **Hawesmere Close** located on the southern side of **Biggleswade**. The location was selected to represent views from Biggleswade and from the A1 corridor. The viewpoint is just over 1km from the nearest turbine, and the predicted view as illustrated by the photomontage shows that 4 turbines would be fully visible and 4 partly visible. The magnitude of change for the landscape is given as moderate, the sensitivity to change as low, with the effects on both landscape character and quality and visual amenity stated as moderate/minor.

Viewpoint 2 is taken from the access track leading from **Hawesmere Close** to the playing fields at viewpoint 1, but from the other (northern) side of the A1 embankment. The viewpoint was selected to demonstrate the screening effects of the A1 embankment. Because the A1 is elevated at this point none of the turbines would be visible. As the A1 provides a considerable screen for the majority of Biggleswade, the visual effect on the town is stated as nil, and there will be no effect on landscape character or visual amenity.

Viewpoints 3a & 3b are taken from a **lay-by** alongside the **northern carriageway of the A1 to the south of Biggleswade** and directly adjacent to the eastern boundary of the site. The viewpoint was selected to represent views from the east and those using the A1. The nearest turbine from the viewpoint is 0.63 km away, and all 10 turbines would be visible from this location. The ES confirms that the magnitude of change in this locality would be substantial given the openness of the view, the sensitivity to change as medium, and the overall effect on the landscape to be major/moderate.

Viewpoints 4a & 4b are located on **Edworth Road** to the south of the application site. The location was selected to represent views from the south and those using the bridle path which crosses Edworth Road. The nearest turbine to the viewpoint is 1km away and the photomontages indicate that 9 turbines will be fully visible and that 1 other will be partly hidden by another turbine. The magnitude of change is stated as moderate, given the openness of the view and the wide panoramic context, the sensitivity of the landscape to change is stated as medium, and the effects on landscape character/quality and visual amenity as moderate.

Viewpoints 5a & 5b are taken from **Flexmore End** on the eastern side of

Langford and to the west of the railway line. The viewpoint has been chosen to represent the view eastwards from this part of the village, and those using the bridleway. The nearest turbine to the viewpoint is 1.13km away and 8 turbines would be fully visible and 2 would be partly hidden (except in winter). The magnitude of change in this location is given as moderate, due to the close proximity of the horizon but also due to the cluttered dominance of the horizon by the railway apparatus.

Viewpoints 6a & 6b are taken from the west side of the level crossing at the end of **East Road, Langford** and near to Balls Farm. The ES advises that this location represents views in close proximity to the railway, views from eastern section of the village, and those from the bridleway which runs east away from the railway. The existing view is dominated by the overhead gantry system and power system on the railway, and the regular passing of high speed trains. There are open views to the south-east and to the higher ground and water tower at Toplers Hill. The predicted view as shown on the photomontage is that 4 turbines would be fully visible and that 6 would be partially or completely hidden (except only partially in winter subject to the degree of tree cover). The nearest turbine from the viewing point would be 0.72km to the west, and the ES describes the magnitude of change as moderate, partially due to the cluttered dominance of the horizon by the railway apparatus, its traffic and vegetation. It is also stated that the sensitivity of the landscape to change is considered to be low to the west of the railway and the overall effect on the landscape on this side of the railway is given as moderate/minor. The sensitivity to change to the east of the railway is quoted as high in the ES, with the effect on this side of the railway as major/moderate.

Viewpoints 7a & 7b are taken from in front of **Biggleswade Rugby Club** which is located between Langford and Biggleswade on the A6001. This location represents views from the west, from properties at the northern end of Langford, road users, users of the amenities including the rugby club, bridleway and footpath network. The existing view is of arable fields and the railway to the east. The relevant photomontage illustrates that 6 turbines would be fully visible and that 4 would be partially or completely hidden (except only partially in winter). The ES advises that the nearest turbine to the viewing point would be 1.04km to the east, and that the magnitude of change would be moderate, partly due to the cluttered dominance of the horizon by the railway apparatus. As the area is likely to be busy at the weekends with visitors to the rugby club, the sensitivity of the landscape to change is considered to be medium, and the overall effect on the landscape and effect on visual amenity would be moderate.

Viewpoint 8 is taken just south of **Sandy Warren** between Sandy and Biggleswade, and the photomontage indicates that 8 wind turbines would be partially visible and that 2 would be hidden by other turbines or vegetation.

The existing view is of Furzenhall Farm set in open pasture with occasional clumps of mature trees. The nearest turbine would be 5.07km away to the south, and given the distance from the proposed development the magnitude of change is stated in the ES as being slight, and the overall effect on the landscape and on visual amenity is moderate/minor.

Viewpoint 9 is taken near to the **roundabout junction to the west of Dunton**, and is included in the ES to represent views from the outlying villages and farmsteads to the east of the application site. The existing view is of broad open arable, medium sized fields with some hedgerows and hedgerow trees. There are pylons and overhead transmissions cables visible on the horizon. The predicted view as illustrated by the photomontage is that 8 turbines would be visible, 1 would be partially visible and the remaining one would be hidden. This view may differ in winter conditions, although the hedgerows and hedgerow trees will partially screen the proposed development. The nearest turbine to the viewing point would be 3.5km to the west, and the ES states that the magnitude of change in the locality would be slight given the distance from the proposed development. This results in the ES concluding that the overall effect on the landscape would be moderate/minor to minor and the effect on visual amenity as being minor.

Viewpoint 10 is located at **Guilden Morden** to the east of the application site on a footpath at the southern end of the village, and represents views from the outlying villages and farmsteads occupying higher ground to the east of the application site. The existing views are of wide scale panoramas of a gently rolling landscape with mainly open arable fields but also some woodland, hedgerows and hedgerow trees. Pylons and overhead cables are sited on the horizon, and the water tower and Topleys Hill can clearly be seen. All 10 turbines would be visible from this location, and the nearest turbine would be 7.4km to the west of the viewpoint. The ES states that the magnitude of change would be slight given the distance from the proposed development, and that the overall effect on the landscape and on visual amenity would be moderate/minor.

Viewpoint 11 is taken from in front of **Etonbury Middle School in Stotfold**, and represents views from the settlement of Stotfold, and users of the surrounding road and footpath network including the nearby A507. The existing views are of broad open fields and the higher ground to the north with the water tower nearby. The predicted view shown by the photomontage shows that all 10 turbines would be visible on the ridgeline, and the nearest turbine would be 3.77km to the north. The magnitude of change in the ES locally is given as moderate given that the development would occupy the horizon, as is the overall effect on the landscape. The viewpoint is considered to have low sensitivity to change, and the overall impact on visual impact would be moderate/minor.

Viewpoint 12 is sited on footpath no.2 which lies between **Henlow** and **Clifton**, and represents views from the roads, villages, open space and pathways to the south-west of the application site. The existing views are of broad open fields with a strong horizon of mature hedgerow, boundary and garden trees associated with the Henlow to the east. The predicted views as indicated by the relevant photomontage shows that 8 turbines would be partially visible and 2 other turbines would be partially hidden by other turbines. The nearest turbine to the viewing point is 3.97km to the north-east of the viewpoint, and the ES states that the magnitude of change is slight given the development will occupy the horizon beyond the settlement. The overall effect on the landscape and on visual amenity is stated as being moderate/minor.

Viewpoint 13 is located next to the River Ivel on the edge of **Shefford**, and represents views from the river corridor and the villages to the west/south-west of the application site. The existing views are of the water meadows associated with the River Ivel and the windmill buildings adjacent to the disused Shefford Mill. Views are contained by mature trees along the river corridor and also along the footpath and field boundaries. The photomontage within the ES predicts that 8 wind turbines would be visible from this location of which 4 would be partly visible. More turbines may be visible in winter when there are not leaves on the trees. The nearest turbine to the viewing point is some 5.6km to the north-east of the viewpoint, and as the development would partially occupy the horizon, the magnitude of change is stated as moderate, as are the effects on landscape character and on visual amenity.

Viewpoint 14 is located within the grounds of **Shuttleworth Agricultural College at Old Warden Park**. The predicted view as shown by the photomontage indicates that no turbines will be visible from this location, and that given the extent of intervening woodland this is unlikely to change in the winter. Whilst the landscape at this location is viewed as being of high sensitivity, the ES states that there will be no effect on landscape character or on the visual amenity of the visitor attractions associated with Old Warden.

Viewpoint 15 is located adjacent to the **A1/A6001 roundabout at Biggleswade**. The ES incorrectly states that this is opposite ASDA, whereas it is actually opposite Sainsburys some 3.5km north of the application site. The viewpoint was chosen to show driver's views southwards from the A1 and views from the northern part of Biggleswade. The predicted view shows that only the blades of one turbine would be visible in the summer, more turbines may be visible in the winter. Given the screening the magnitude of change in this locality would be negligible to slight, and the overall impact on the landscape would be minor/none and the impact on visual amenity is stated as minor.

Viewpoint 16 is located within the cemetery adjacent to **Stotfold Road** on the

northern edge of **Letchworth Garden City**, and was chosen to represent the views from the larger settlements in the wider study area to the south of the application site. The predicted view shows that all the turbines would be hidden, due to the screening effects of mature trees associated with settlements between the viewpoint and the application site. The nearest turbine would be 7.28km to the north, and the magnitude of change in this location as described by the ES would be negligible to slight given that the development would be hidden by vegetation. The impact on the landscape and visual amenity are both viewed as being minor.

Viewpoint 17 is taken from the **Greensand Ridge** which occupies the higher ground to the west of the application site, and represents views from the wider landscape and also from long distance recreational footpaths. The predicted view in the ES shows that the blades of 8 turbines would be partially visible in the far distance and 2 turbines would be hidden. The existing view is panoramic across open arable fields looking towards the east/south-east. The nearest turbine would be 8.7km from the viewpoint, and the magnitude of change in this area is stated as negligible to slight given the distance of the turbines from the ridge walk. Both the impact on landscape character are viewed in the ES as being minor.

Viewpoint 18 is located on an elevated position at **Newnham Hill** to the south-east of the application site, between Ashwell and the A1. The location was chosen to represent views from the wider landscape to the south-west. The photomontage indicates that 3 turbines would be fully visible (although the column bases would be partially hidden) and 7 would be partially visible. The nearest turbine would be 5.03km from the viewing location and the magnitude of change in this location is considered in the ES to be slight given the broad scale open landscape. The overall impact on the landscape and on visual amenity is considered to be moderate/minor.

In order to assist its consideration of the application, the Council appointed a Landscape Planning Consultant to provide technical advice regarding the impact of the development on the landscape. His overall conclusions regarding the original proposal for 16 turbines are summarised below:

- On the one hand the general landscape characteristics of the area appear to provide a suitable broad open canvas for a wind farm, where basic landscape value and sensitivities are not prohibitive to such a development. Whereas on the other hand, the development is likely to cause significant harm to the visual amenities of the eastern aspect of Langford and local residents could be considerably disturbed by the situation
- The landscape amenities of the area are not particularly valuable or sensitive. The area is not unattractive, but is also not of particular scenic or landscape character note. It is a broad open landscape that is

capable of accommodating a large wind farm as any other lowland English landscape.

- Langford and other nearby villages represent sensitive receptors in close proximity to the wind farm, where the magnitude of visual impact will be at its highest. The visual impacts caused to the amenities of the local public rights of way network could be similarly affected.
- A wind farm can be considered a sculptured group of elegant structures set within a landscape canvas. However, this image is surely broken when the wind farm is either, uncomfortably close to and dominating in the view from domestic properties, or is conflicted by the intrusion of other incongruous and untidy elements such as pylons. This might prove to be the case with views from the eastern edge of Langford. Here the wind farm will be very close and the long spread of the turbines will occupy a wide angle view from left to right. This could be considered to produce a magnitude of impact that is overbearing in the circumstances. Also the turbines will be set behind, and far enough back from the rail line, such as the gantry structures, that cut across the view, will be seen directly in front of and visually conflicting with the turbines
- The case is balanced, with different landscape and visual considerations for and against. It will never be easy to find a location where there is no resistance to a wind farm. This could be a good location from a landscape point of view but may not be so favourable in terms of its likely visual impacts on local communities.

In view of the Council's concerns regarding the impact of the original 16 turbine proposal on Langford in particular, meetings were held with the applicant regarding reducing the number of turbines proposed. The Council's Landscape Planning Consultant was of the view that reducing the overall north-south spread of the wind farm would be more effective in controlling the more damaging aspects of the visual impacts of the scheme, and that a more concentrated cluster of turbines would result in a more acceptable scheme from a visual impact and landscape character point of view. Subsequent negotiations with the applicant led to the removal of 6 turbines. In responding to the revised scheme of 10 turbines, the Landscape Planning Consultant's comments can be summarised as follows:

- The current scheme for 10 turbines appears to be an evolution from suggestions for a concentrated cluster. It removes the five most southerly turbines and another on the Langford edge of the group. This creates a more concentrated group that reduces the apparent spread of turbines when viewed from the east or west and is also pushed back further from Astwick Conservation Area. In this respect there is a definite improvement in landscape and visual impact terms.
- Any commercial scale wind farm in any landscape will bring about significant impacts. In an English lowland landscape those impacts

are likely to be appreciated in quite close proximity by one community or other. The intrinsic nature of this broad open landscape is not unsuitable for wind farm development. The question is whether in this case the scheme is now reduced and set out such that impacts on local communities including Langford are now acceptable, or will the impacts still be overbearing to those properties affected. The scheme will certainly be less dominant but perhaps has not achieved the full, though perhaps subtle, benefits a different 10 turbine arrangement might.

- The success of this scheme in landscape and visual terms may also depend on the effectiveness of associated landscape plantings. This may include hedge, tree and woodland copse plantings as general landscape enhancements as well as some localised and specifically placed screen planting.

Conclusion (The impact of the proposal upon landscape character)

Within close proximity to the proposed wind farm it is clear that it would have a radical impact on the landscape. However, this is very likely to be the case for any wind farm proposal and it is necessary to weigh this impact against the strong support for renewable energy proposals in both local and national planning policy. It is not considered that the proposal would be contrary to Policy DM1 as it would not have an unacceptable impact on any area identified within the LCA as being of high sensitivity. Moreover, the application site is not subject to any local or national landscape designation. Having considered the impact of the proposal very carefully, and taking into account the representations received, as well as the overall benefits of the scheme in terms of renewable energy production, it is not considered that the proposal in terms of landscape impact would be unacceptable.

3. The effect on the residential amenity of nearby residents

There are several different issues that must be considered in assessing the impact of the development on the amenities of neighbouring properties. These issues broadly fall within the categories of visual impact, noise and shadow flicker.

Visual Impact

There are many residential properties which would have a view of the wind farm if it was constructed on the site, and this is particularly the case for many dwellings in Langford. However, the fact that a development is visible from a particular dwelling is not in itself indicative that the impact on amenity is harmful. It must be accepted that the prominence of any development reduces over distance, and other factors such as topography and screening must also be taken into account.

Having assessed the proposal in detail, it is considered that the dwellings most likely to be materially affected by the wind farm are those isolated properties located to the east on the A1, Greenways sited on Edworth Road, the dwellings located to the east of the railway and at the end of East Road, Langford, Holmegate Bungalow & Harrison House, Sheep Walk, and Beauford Farm to the north of the site.

Given the screening effects of Stratton Business Park, London Road Retail Park and the elevated A1, it is not considered that the proposal would have a material adverse impact on Biggleswade or any residential property located there.

Starting with those dwellings on the A1, Newspring Cottages are located to the east of the highway and consist of two pairs of semi detached dwellings. The front elevations of the houses are sited very close to the highway, and it is likely that most of the turbines will be clearly visible from these properties. Turbine 6 would be nearest to Newspring Cottages at about 750 metres away. The land in this area is generally level and there is no screening of any significance alongside the A1. As such the wind farm would be very prominent when viewed from the front facing windows within these dwellings.

However, the rear facing windows and main garden areas would not be affected to any material degree as most wind turbines would be screened by the existing dwellings. Having regard to the siting of the dwellings and their orientation to the proposed wind farm, it is not considered that the visual impact of the development would be to such a degree to warrant the refusal of the application.

Moving south on the western side of the A1 are the dwellings known as Tomain and Newspring Cottage which are a pair of semi detached houses adjacent to the listed Anglian Water pumping station. The two dwellings have first floor windows which will overlook the wind farm. Whilst both properties have screening along their rear boundaries with the application site and outbuildings in their gardens, it is also likely that the turbines will be visible from ground floor windows too. Whilst all the turbines will be capable of being seen from these houses, numbers 1-3 at their nearest point will be just over 950 metres to the north west. The orientation of the rear elevations is more towards turbines 4-10, with the nearest turbine to the dwellings being 6 at around 740 metres away. There is no doubt that the outlook from Tomain and Newspring Cottages will be radically altered if the wind farm was constructed. However, the key question is whether this visual impact would be to such an extent as to be viewed as constituting overbearing impact. It is also necessary to take into account the fact that the land slopes gently away from the rear of the dwellings, and that this will slightly lessen the prominence of the development. Overall, taking into account the siting of the turbines relative to the dwellings, it is not considered that the visual impact on Tomain and

Newspring Cottage would be unacceptable.

A short distance to the south along the A1 is Bleak Hall Smallholding, which appears to consist of a residential property sited side on to the application site, and outbuildings which are in agricultural use. A number of tall mature trees are sited to the west of the dwelling, and although there are side windows which would face the wind farm, the main orientation of the dwellings appears to be in the direction of north south. Given the location of the dwelling, it is not considered that turbines 1-3 would have a material impact on its amenities. The nearest turbine to the property would be turbine 6 at approximately 740 metres. Similar considerations apply in terms of the visual impact of the development as are set above for Tomain and Newspring Cottage. However, the impact is considered to be less at Bleak Hall Smallholding given the mature trees at the site and the majority of windows at the property do not look towards the application site. As such, the impact of the development on this dwelling is considered to be acceptable.

Further south on the A1 are a pair of semi-detached houses named 1 & 2 Bleak Hall Cottages. The left hand cottage thought to be No.1 had an open boundary with the agricultural land to the west when a site visit was undertaken. No.2 Bleak Hall Cottages benefits from boundary screening consisting of trees and shrubs. The rear elevation of the dwellings face west, and several of the turbines would be visible from the dwellings. However, turbines 1-6 would be located to the north west of the dwellings, and given the orientation of the properties it is not considered that these particular turbines would have a material impact as the nearest would be 1 km away. Turbines 7-11 would be directly west of the dwellings, the nearest being to the rear elevations of the dwellings turbine 11 some 925 metres away. In this location there is a clear change in levels from the west of the A1, with the land sloping away to the generally level area where the turbines would be sited. This factor will reduce the impact of the development, and given the siting of the dwellings relative to the turbines it is not considered that the visual impact of the proposal on 1 & 2 Bleak Hall Cottages would be viewed as being overbearing.

Bleak Hall is located a short distance to the south, and is sited in substantial grounds with many mature trees surrounding the site. A large outbuilding is located near to the western boundary of the land. The nearest turbine to Bleak Hall itself is just less than 900 metres away. As they are sited over a kilometre to the northwest, it is not considered that turbines 1-6 would have a material impact on the property. It is clear from site visits undertaken a various times during the year that Bleak Hall benefits from substantial screening when the trees are in leaf. The level of screening is certainly less in the winter months. Taking into account the overall level of screening and its distance and position relative to the turbines, it is not considered that the impact on Bleak Hall would be unacceptable or be viewed as being overbearing.

Bleak Hall Farm is located a short distance away from Toplers Hill water tower and is over a kilometre away from the nearest turbine. The garden of the property is screened by a tall hedge, all the turbines would be located to the north west. Having regard to the location of the dwelling, and the position of the nearest turbine at 1km away, it is not considered that it would experience any unacceptable visual impact as a result of the proposal.

Tower Close is a bungalow located at the junction of the A1 and Edworth Road. The front boundary of the property is screened by trees, shrubs and tall conifers. There are unlikely to be significant views to the northwest towards the wind farm due to this screening, any that there are will be dominated by the tall water tower located on the opposite side of the highway. Turbine 11 is nearest to Tower Close but at over 1.5 km, it is not considered that there will be any material impact on this dwelling.

Greenways is a detached dwelling located to the southwest of the application site on Edworth Road. The rear of the property faces north, and the wind farm would be located to the northeast. There is screening in the form of hedging along the side and rear boundaries of the dwelling. The nearest turbine to the property is no.10, located over 1.15 km from the building. Looking to the northeast from the dwelling, the wind farm will be a prominent feature in the landscape. However, only 4 of the turbines would be within 1.45 km of the dwelling and none of the turbines are directly to the north of the site. For these reasons, it is not considered that the proposal would have an unacceptable impact on Greenways.

There are many properties in Langford which will be capable of seeing the some or the entire wind farm. This applies to properties particularly to the eastern edge of the village, along Cambridge Road, Station Road, Jubilee Lane, Manor Close, Windsor Way, Prospect Road, Church Street and East Road. With the exception of some dwellings at East Road, all dwellings located on the above highways are a Minimum of 1.1km away from the nearest turbine. It should also be noted that the rear elevation many dwellings off Cambridge Road, Manor Close, Prospect Road and East Road face north with their front elevations facing south. As such, the wind farm would only be visible to most of these dwellings by looking to the east or northeast from garden areas. The front/rear elevation of other dwellings in Station Road, Manor Close, Windsor Way, Church Street and part of East Road and Garfield will face the direction of the wind farm. The turbines will be a prominent part of the landscape which will be viewed beyond the east coast railway line and the associated overhead power lines.

A number of residents living at the eastern half of East Road will be within 1 km of either turbine 4 or 7. In terms of those dwellings whose rear or front elevations face north, it is not considered that the proposal would have an

unacceptable visual impact, as these properties do not have east facing windows looking towards the application site. The rear/side elevations of numbers 36, 97, 104-110, 118 East Road and 5 -15 St Andrews Way do look east and some of the turbines will be clearly visible to these residents. However, the nearest turbine is more than 750 metres from the nearest of these properties, and given this distance it is not considered that the visual impact would be unacceptable.

It is particularly relevant to consider the impact of the proposal on those properties located at the end of East Road on the eastern side of the railway. 99 & 101 East Road are accessed by using the level crossing, and in approaching these dwellings from the level crossing most of the turbines will be very prominent. The front elevation of the dwellings face south, with the rear facing north. There is a window in the first floor side elevation of 101 East Road, and a number of outbuildings located to the east and northeast of the dwellings. There are also a number of trees within the rear garden of the dwellings as well. All ten turbines would be located to the northeast, east, or south east of the dwellings. However, most of the turbines could only be viewed obliquely. Whilst the occupants of these dwellings would see the turbines on a daily basis approaching and leaving their properties, from within the buildings and gardens, it is not considered that the visual impact would be unacceptable given the orientation of the houses.

Holmegate bungalow is located just over 650 metres to the north west of turbine 1 and to the west of the railway on Sheep Walk. Outbuildings are located between the dwelling and the railway, and there is screening to the dwelling in the form of a 2.5 metre hedge. Whilst the occupants of the property will see the wind farm on a daily basis in approaching their dwelling, views from the bungalow itself are unlikely to be overbearing given its siting.

Harrison House is also located on Sheep Walk and is just under 800 metres from turbine 1. There are a number of tall conifers around the garden of the dwelling, and whilst the wind farm will be visible from the property all but one of the turbines will be over 1km away. It is not considered that the development would have an overbearing impact on Harrison House given the siting of the development.

There has been a significant level of objection to the proposal particularly from Langford Parish Council and Langford residents who live in the properties/highways mentioned in this report. The fact that the proposal will be visible from properties in Langford is not in itself a valid reason to refuse the application. The key issue for the Council is to assess the degree of visual impact that the proposal would have on Langford residents. Having given detailed consideration to the proposal, and its implications visually for the local community, and given the detailed siting and distance of the turbines from most properties, it is not considered that the visual impact of the

proposal on Langford residents would be to an unacceptable degree.

Conclusion (visual impact)

It is acknowledged that the proposal will alter the setting of the village and many local people view the development as having an adverse impact. However, the Council is required to consider these objections and to weigh them against the benefits the proposal would bring in producing renewable energy. It is in this context, and given the above considerations, that the proposal is viewed as being acceptable in terms of its impact on Langford and on nearby dwellings.

Noise

Paragraph 22 of PPS 22 Renewable Energy, advises that renewable technologies may generate small increases in noise levels (whether from machinery such as aerodynamic noise from wind turbines, or from associated sources- for example traffic). There is a requirement for local planning authorities to ensure that renewable energy developments are located and designed in such a way to minimise increases in ambient noise levels. PPS 22 states that the 1997 report by ETSU (ETSU-R-97) for the Department of Trade and Industry should be used to assess and rate noise from wind energy development.

The companion guide to PPS 22 outlines that noise levels from turbines are generally low and that, under most operating conditions, it is likely that turbine noise would be completely masked by wind-generated background noise. There are two quite distinct types of noise source within a wind turbine which are the mechanical noise produced by the gearbox, generator and other parts of the drive train, and the aerodynamic noise produced by the passage of the blades through the air. The companion guide goes on to say that since the early 1990s there has been a significant reduction in the mechanical noise generated by wind turbines and it is now usually less than, or of a similar level to, the aerodynamic noise. The guidance states that aerodynamic noise from wind turbines is generally unobtrusive – it is broad band in nature and in this respect is similar to, for example, the noise of wind in trees. In addition, wind-generated background noise increases with wind speed. The difference between the noise of the wind farm and the background noise is therefore liable to be greatest at low wind speeds.

The ETSU-R-97 guidance describes a framework for the measurement of wind farm noise and gives indicative noise levels calculated to offer a reasonable degree of protection to wind farm neighbours, without placing unreasonable restrictions on wind farm development or adding unduly to the

costs and administrative burdens on wind farm developers or planning authorities. The guidance states:

'The planning system must therefore seek to control the environmental impacts from a wind farm whilst at the same time recognising the national and global benefits that would arise through the development of renewable energy sources and not be so severe that wind farm development is unduly stifled'

The ETSU-R-97 assessment procedure specifies that noise limits should be set relative to existing background noise levels at the nearest properties and that these levels should reflect the variation in both turbine source noise and background noise with wind speed. Separate noise limits apply for the daytime and nighttime. Daylight limits are chosen to protect a property's external amenity and night-time limits are chosen to prevent sleep disturbance indoors.

The applicant submitted a noise assessment for the original proposal for 16 turbines. The Council's Public Protection Team appointed an acoustics consultant to advise them on the likely noise impact of the development on existing residential properties in the area. The response from the consultant stated that noise predictions demonstrate substantially more noise would arise than predicted in the ES, and that the resultant levels indicated unacceptable noise levels in excess of the guidelines value. Moreover, the consultant considered that the background noise measurements were unreliable for a significant number of reasons and they over-predict the true existing noise environment at residential amenity areas.

In conjunction with reducing the number of turbines proposed to 10, the applicant commissioned a new noise report which forms part of the ES but is contained in a separate document. Prior to doing so, the methodology for undertaking the background noise survey was agreed with the Public Protection Team and their consultant. The key findings of the applicants noise report for the amended scheme are summarised below:

- A number of residential properties lying around the wind farm have been selected as being representative of the closest located properties to the wind farm. The minimum separation distance between the nearest turbine and the closest located residential property is approximately 660m. An operational noise impact assessment has been undertaken at these properties by comparing predicted noise levels with relevant impact assessment criteria. These limits have been derived from the existing background noise levels at 7 surrounding properties, as derived from measurements made over 30 days or more at each location.
- The baseline noise survey identified a significant influence from the A1

road on measured noise levels. Of the properties located around the proposed wind farm, those furthest from the A1 are exposed to significant noise levels, of short duration, from train movements on the East Coast Main Line. Despite their subjective impact on the baseline noise environment, these short train pass-by events were not found to affect the measured $L_{A90,10min}$ levels, used as a basis of the derived noise limits, because of the filtering used for this noise index.

- Operational noise from the wind farm has been assessed in accordance with the methodology set out in the DTI Report ETSU-R-97, 'The Assessment and Rating of Noise from Wind Farms'. This document provides a robust basis for assessing the operational noise impact of a wind farm as recommended by PPS 22, additional Government advice and the draft NPS EN-3.
- To undertake the assessment of noise impact in accordance with the foregoing methodology the following steps have been undertaken:
 - Measure the existing background noise levels at the nearest neighbours as a function of site wind speed
 - Determine the day-time and night-time criterion curves from the measured background noise levels at the nearest neighbours
 - Specify the type and noise emission (the sound power actually emitted by the turbines) characteristics of the wind turbines
 - Specify the number and locations of the wind turbines
 - Identify the locations of the nearest, or most noise sensitive, neighbours
 - Calculate the noise immission levels (the noise levels resulting at a particular location some distance away from the source of noise) due to the operation of the wind turbines as a function of site wind speed at the nearest neighbours
 - Compare the calculated wind farm noise immission levels with the derived criterion curves.
- The above steps have been applied to the Biggleswade Wind Farm with the noise impact assessment being undertaken at a total of 16 locations comprising residential properties lying in the vicinity of the background noise monitoring locations.
- Applying the ETSU-R-97 derived noise limits at the assessment locations it has been demonstrated that both the day-time and night-time noise criterion limits can be satisfied at all properties across all wind speeds. Specifically, this assessment has determined that the noise limits of ETSU-R-97 can be achieved both with and without applying a filter in the analysis to take into account the effect of different wind directions, as directional noise propagation affects both

the significant levels of road noise from the A1 as well as noise emitted by the turbines. The data derived in this report can be interpreted by the Local Planning Authority to apply limits in line with ETSU-R-97 recommendations, by considering realistic situations for the comparison of background and wind farm levels at residential properties neighbouring the proposed development.

- This assessment has been based on the use of the manufacturer's sound power data for the Vestas V80 2MW wind turbine that is typical of the type and size of turbine which may be considered for this site, and assuming worst case downwind propagation.

The applicant's noise report concludes by stating that operational noise immission levels are acceptable in terms of the guidance commended by planning policy for the assessment of wind farm noise, and therefore considered not significant in EIA terms.

The Council's Public Protection Team were consulted regarding the applicant's noise report and the summary of his findings is outlined below:

Our analysis show additional work is required on the noise impact part of the Environmental Assessment to enable an appropriate finding and conclusion on the likely effects in planning terms to be made. This need arises both due to fundamental issues with the methods employed in the EIA but also because of concern with the basic data. The main points are summarised below with outline recommendations.

As identified in the Introduction above, the effect of averaging propagated noise and using semi-soft ground conditions at receiver locations is to understate noise levels. We consider this understatement can be between 2-5dB. The effect is to change the findings of the analysis at a number of locations to one that exceeds the limits identified within ETSU-R-97. Whilst ETSU-R-97 is generally considered as a pass or fail system in terms of excess noise, potential exceedance needs to be placed in context. This in turn requires an analysis of the conditions, their likelihood of occurrence and any mitigation measures.

Assessment method not compliant with ETSU-R-97. The ES claims compliance with this guidance but this is not the case. The guidance compares wind speeds at 10 metres height with the background noise at those wind speeds in order to derive limits. It is not dependant or related to wind speeds at hub height. ETSU-R-97 compares the predicted turbine noise level with these limits to assess compliance. The turbine noise level is dependant on the wind speed at hub height.

The method in the ES compares background noise levels with 70 metres

height wind speed but which is then adjusted by an artificial (fixed) value to give the appearance that it compares the noise with low height wind speed. This change is argued in the ES to account for wind shear but wind shear affects the turbine noise level experienced relative to any 10 metres wind speed and not the background noise levels. As identified the latter is unrelated to the hub height wind speeds. Further the process adopted in the ES averages wind shear effects rather than considering their impact on turbine noise during a certain periods of time. Finally the relationship of the wind shear occurring during the background noise survey, compared to the typical wind shear range for the site is simply arbitrary.

The authors argue their process is “best practice” but it merely represents a method devised by a small group of acousticians. It is not supported by research and does not follow government guidance. As a consequence of the lack of research supporting the method we started our own research work on it. This is showing it fails to identify the periods of greatest adverse impact and is not robust. It is also claimed the procedure provides improved protection through accounting for wind shear but we have found it allows more noise than ETSU-R-97 intended.

The consultant for public protection goes on to make a number of recommendations regarding concerns with the applicants noise assessment, and the need for additional work which are outlined below:

- There is a need to assess the impact from noise in accordance with ETSU-R-97
- Check data sources to identify errors
- Re-analyse the data and only exclude periods of rainfall affected data or those where heavy rain has led to increased levels of noise whilst roads were still wet
- In relation to the atmospheric conditions and especially the wind shear arising, identify how the period of monitoring used compares with similar periods of previous years and how it differs with other seasons
- Undertake an analysis of the linear data compared to the 10m measured wind speed data
- Assess the periods of elevated background noise at western locations to see if there is a pattern between low wind speed and high wind shear with raised traffic noise
- Undertake an additional analysis to assess the increased attenuation of background noise relative to turbine source noise at western facing facades for dwellings on the western boundary of the A1.
- Provide a propagation assessment using hard ground conditions and receiver height of 1.2-1.5m to compare with the semi-soft propagation model.
- Provide a separate analysis of the increases in ambient noise arising from the proposed development and identify how the design minimizes

these

- Undertake a sufficient analysis of noise impact in terms of levels and time to enable an adequate analysis of what controls are required
- Identify the different rainfall periods at different locations and identify how data uncertainty was addressed at locations without measurements of rainfall
- Provide data for the effects of the wind shield on interaction noise levels and the residual noise generated at relevant wind speeds

The overall view of the Public Protection Team's consultant is that further analysis is required to reduce uncertainty in the data and also provide predictions of actual impact. He considers that higher levels of noise will arise than the information provided in the ES shows. The ETSU-R-97 guideline values will be exceeded at a number of dwellings. In addition, not all likely significant forms of impact by noise have been adequately assessed, in particular the occurrence of excess Amplitude Modulation and the problem of protecting facades facing wind farms in areas of high traffic noise.

In terms of those dwellings which would be affected by unacceptable noise level, the consultant has more recently advised that the properties on East Road, particularly those east of the railway line would be worse affected. Concerns also relate to noise levels at other dwellings on the eastern side of Langford around Windsor Way, and uncertainties regarding noise levels for residences on the A1.

The recommendation from the consultant is as follows:

Considering the issues identified above and that revisions to the layout of the site had previously been undertaken, which did not resolve the problems of noise, we recommend refusal of the development. This is based on the grounds the development will lead to excessive noise impact and does not meet the limits set in ETSUR-97. Refusal is also recommended as there is not sufficient information to formulate appropriate noise limits to enable the protection of residential amenity.

Conclusion (Noise)

It is a requirement of policy DM1 that renewable energy installations shall not be harmful to residential amenity due to the noise that they produce. On the basis of the advice provided by the Council's Public Protection Team via their consultant, it is considered that the proposal fails to accord with policy DM1 in terms of noise impact on nearby residential properties and should therefore be refused.

Shadow Flicker

The companion guide for PPS22 – Renewable Energy advises that under certain combinations of geographical position and time of day, the sun may pass behind the rotors of a wind turbine and cast a shadow over neighboring properties. When the blades rotate, the shadow flicks on and off; the effect is known as shadow flicker. It only occurs inside buildings where the flicker appears through a narrow window opening. The seasonal duration of this effect can be calculated from the geometry of the machine and the latitude of the site. The guidance states that although problems caused by shadow flicker are rare, for sites where existing development may be subject to this problem, applicants for planning permission for wind turbine installations should provide an analysis to quantify the effect.

The likelihood of shadow flicker occurring and the duration of such an affect depends upon;

- The direction of the residence relative to the turbine
- The distance from the turbine
- The turbine hub-height and rotor diameter
- The time of the year
- The proportion of day-light hours in which the turbines operate
- The frequency of bright sunshine and cloudless skies (particularly at low elevations above the horizon); and,
- The prevailing wind direction

The companion guide also states that shadow flicker can be mitigated by siting wind turbines at sufficient distance from residences likely to be affected. Flicker effects have been proven to occur only within ten rotor diameters of a turbine. Therefore if the turbine has 80m diameter blades, the potential shadow flicker effect could be felt up to 800m from a turbine. In addition, it is possible to implement mitigation measures to prevent an unacceptable impact from shadow flicker, and this can range from the applicant installing window blinds at affected dwellings, to programming the turbines to shut down at the times when shadow flicker is likely to occur.

The ES considers the issue of shadow flicker in some detail. It notes that there is no UK guidance on a maximum limit for shadow flicker, however it is generally accepted that should the occurrence be greater than 30 hours per year then this is considered a significant effect under the EIA Regulations. This is based on a court case in Germany in which a judge tolerated 30 hours of actual shadow flicker per year at a neighboring property. The actual shadow effects of shadow flicker are determined by the weather and sunshine hours, and the applicant has therefore used data from the Met Office in their assessment.

The ES outlines that Balls Farm and approximately 8 properties at the end of East Road Langford may experience shadow flicker in the early morning.

Although the dwellings may theoretically experience a total of 236 days of shadow flicker, any effect could occur for 39 hours after 7.00am i.e the time after which the occupants are likely to be active and potentially using the rooms where shadow flicker may occur. Taking into account data from the Met Office, it is stated that these properties will on average experience 10.5 hours of shadow flicker per year, which is below the 30 hour suggested threshold and viewed as being a minor effect.

The residential property Bleak hall is located adjacent to the A1 is sited beyond the 800m distance (being more than ten rotor blades from the nearest turbine), and is surrounded by mature trees. It is therefore unlikely to be affected by shadow flicker. The property has outbuildings on its western boundary which may theoretically experience a total of 47.1 hours of shadow flicker associated with the sun setting intermittently throughout the year. Taking account of weather data, it is indicated that the outbuildings which are not occupied for residential purposes may experience 16 hours of shadow flicker which is below the suggested threshold and considered by the ES to be a minor effect.

Further north on the A1 the two dwellings adjacent to the pumping station, namely Tomain and Newspring Cottage may theoretically experience a total of 88.2 hours of shadow flicker, given weather data this is likely to equate to a maximum of 30.4 hours per year which is just over the 30 hour threshold. This is viewed within the ES as a minor significant effect, and it notes that some of the properties have evergreen hedging on their rear boundaries which will help mitigate the effect. However, both properties have first floor rear windows which will not benefit from this screening. The farm unit Bleak Hall Smallholding is also located nearby, although the property is within the participating ownership for the proposal.

Newspring Cottages consist of 4 dwellings located on the east side of the A1 overlooking the application site, and the ES indicates that these dwellings are likely to experience 24 hours of shadow flicker per year which is below the threshold identified in the ES, and is considered to be a minor effect.

Beaufort Farm is located to the north of the application site, and could theoretically experience 30.4 hours of shadow flicker per year from November to January, but taking into account weather data this is likely to reduce to only 8 hours per year and the ES considers this to be a minor affect.

Holmegate and Harrison House (named as Holme in the ES) are located to the west of the application site to the north of Langford and close to the railway. The properties could theoretically experience 46.5 and 36.8 hours of shadow flicker per year from the rising sun between 7 and 9 am during November to February. Taking into account weather data, the actual values are likely to be some 9 and 7 hours of shadow flicker per year and therefore

not viewed as being a significant effect.

Conclusion (Shadow Flicker)

There are clearly a number of variables which contribute to the occurrences of shadow flicker. Concerns do exist in this respect particularly regarding the possible impact of shadow flicker on the dwellings Tomain and Newspring Cottages. From the information available it is considered that appropriate conditions could be imposed on any permission granted which would give a reasonable degree of protection to affected dwellings. This would require a scheme of mitigation to be submitted to the Council either prior to operation of any turbine, or in the event of a valid complaint being received and confirmed as being valid after further investigation. Such mitigation measures may require the turbines to shut down when the affected residents are likely to experience shadow flicker.

4. The impact on local ecology

The application site itself has no land designations. There is a Local Nature Reserve (Henlow Common and Langford Meadows) approximately 750 metres away from the site. There are no County Wildlife Sites nearby.

The following surveys were undertaken:

- Birds (wintering, breeding, supplementary)
- Bats
- Badger, great crested newt and water vole
- Inventory of hedgerows/wet ditches, ponds, ditches
- Incidental observations of other flora and fauna

The baseline conditions are described as follows. The land is open and fairly featureless and is currently divided into fields for arable farming. Background records indicate the presence in the general area of various birds, bats and some other species, such as badger. The arable land is cultivated and is therefore subject to regular change. Sometimes the fields are set-aside for a season. Much of the diversity is found at field edges, ditches and hedgerows on the site.

The site may have importance to the following species:

- Birds
- Bats (although the site is fairly featureless which reduces its appeal)
- Badgers (at very low densities)

No other protected species are confirmed on the site, or are thought likely to be resident. However there is always the scope for the occasional and transient use of the site by species, most likely at very low levels.

Direct impacts include the loss of or damage to vegetation and indirect

impacts include disturbance as a result of noise, traffic or increased human presence, pollution as a result of dust or chemicals or avian species colliding with the turbines. There are no nearby wind farms and so there would be no cumulative impacts.

The risks to birds are: collision risk, displacement and human disturbance. Calculating the collision risk is controversial as the avoidance rate figure is a critical part of the calculation. Therefore best and worst case scenarios have been calculated. The species considered to be at significant risk are the golden plover and, to a lesser extent, the buzzard. Studies suggest that both birds have an ability to avoid collision. With regards to displacement, past studies show varying results. Overall it is not considered to pose a problem (taking into the baseline conditions and probabilities). In any event, displacement has a beneficial consequence in reducing collisions. The impact of human disturbance is likely to be minimal as the species at the site are already conditioned to agricultural activity.

Past evidence, combined with the distance from the turbines to likely habitats, suggests that bats will not be affected. Assessing whether the site has any significance for migratory bats is difficult. Studies from the US identify upstanding topographical areas and forested ridges as potential areas of conflict. In this context, the designed-in stand-off from the higher ground of Topley's Hill in the south-east of the site is likely to reduce the scope for unidentified effects from this source. Furthermore, the area had very low bat activity throughout the surveys.

Badger setts are located sufficiently far away so as not to be affected. No other effects are probable, due to the nature of the site.

Suggested mitigation measures include planting hedgerow elsewhere, ensuring the rapid reinstatement of hedgerow vegetation and altering farming practices. Overall, the ES concludes that there is some impact at Parish level but no impact on resources at District, County or wider geographical levels is predicted.

With regards to relevant policy, PPS9 *Biodiversity and Geological Conservation* notes that planning decisions should aim to maintain, enhance, restore or add to biodiversity interests. If granting planning permission would result in significant harm to biodiversity interests, the LPA must be satisfied that the development could not reasonably have been located elsewhere and that adequate mitigation measures are put in place. If mitigation is not an option then compensation measure should be sought. If this is not an option, planning permission should be refused.

This companion guide to PPS22 highlights that the impact of a wind farm on local ecology should be minimal, as much of the land is unaffected. It also

notes that there is little evidence to suggest domesticated or wild animals would be affected; in fact there are places where cows and sheep graze at the bases of turbines. With regards to birds, the document notes that the risk of collision between moving blades and birds is minimal for migrating birds and for local habitats. The biggest problem is that of 'bird strike', whereby birds flying through the area swept by the blades are struck causing injury or death. However the document highlights that this is only likely to occur if a wind turbine is directly in a migration path or where there are high concentrations of species.

Policy DM15 of the Council's Core Strategy and Development Management Policies DPD notes that where planning applications are considered to have an impact on wildlife, whether habitats or species, advice will be sought from relevant national and local organisations and applications considered to be harmful to wildlife will be refused.

In terms of the consultation process, concerns were raised by one of the Parish Councils and a number of nearby residents about the impact of the turbines on birds, specifically the risk of collision. The general feeling is that birds, including rare birds, will be detrimentally affected. Reference was made to the RSPB's change of heart (reported in the press) and it was even suggested that the RSPB are wrong in stating no objection to the scheme.

Concerns were also raised with regards to other flora and fauna in the area (such as loss of hedgerows), and also the wider area. It was suggested that the area should remain solely for growing crops.

The RSPB raise no objection to the proposal although they do have some reservations over the survey methods used for the ES. They also note that barn owls have been confirmed foraging nearby to the site, yet these were not recorded in surveys. Nevertheless barn owls are protected under Schedule 1 of the Wildlife and Countryside Act.

The RSPB recommend that, if planning permission is granted, certain conditions are attached, for example with regards to mitigation measures and to restrict construction work during the main breeding season.

Natural England objected to the original position of turbine 7 which was 45 metres from an important hedgerow which crosses the site in an easterly direction from Balls Farm. However, when the proposal was revised to 10 turbines, Turbine 7 was moved 43 metres further south to provide a larger buffer zone for bats and to combat this objection. Natural England now raise no objections. With regards to the loss of hedgerows, Natural England suggests conditions to ensure re-planting. They also suggest a condition relating to post-construction monitoring and they suggest that the badger survey is updated.

The Council's Ecologist notes that the reduction in the number of turbines will reduce the impact on biodiversity however there is concern about the loss of hedgerows. There is support for any mitigation measures, especially against loss of hedgerow.

Conclusion (Ecology)

In accordance with the Natural Environment and Rural Communities Act 2006 Section 40, every public authority must, in exercising its functions, have regards, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. The relevant consultees have raised no objection to the scheme, provided that mitigation measures are put in place. The ES notes that mitigation is possible to reduce and overcome some of the potential impacts, which is in line with the guidance given in PPS9 and also the Council's Core Strategy and Development Management Policies DPD. Overall therefore, subject to conditions, the proposal is considered to be acceptable in this respect.

5. The impact on hydrology/ geology/ flood risk/ contamination

The ES describes the baseline conditions as follows. The land is predominately arable farming land with a mixture of fields. The site surface is mostly 'exposed' soil and it is assumed that rain water percolates directly into the ground, with excess water flowing towards drainage ditches.

The application site is within Flood Zone 1 and is therefore not within an area recognised to be liable to flooding. There are no sites within the vicinity designated by the Joint Nature Conservation Committee within the Geological Conservation Review and no geological Sites of Special Scientific Interest lie within the vicinity either. The site is identified as lying within a Nitrate Vulnerable Zone.

Surface water bodies on the site include open ditches and channels for drainage and/or irrigation for agricultural purposes. The principal hydrological feature in the vicinity of the site is the River Ivel. Several minor water courses cross the site flowing northward and westwards, often following field boundaries to join the River Ivel (to the west).

The northwest of the site is underlain by a Major Aquifer (Greensand). The southeast corner is also underlain by a Major Aquifer (Lower Chalk), although the ES notes that this is unlikely to yield a significant volume of water due its isolated location. Immediately to the south of the Major Aquifer in the north of the site, there is also a Minor Aquifer (River Terrace Gravel). The majority of the site is underlain by a non-aquifer (Boulder Clay over Gault Clay).

There is abstraction from a borehole at Newspring Pumping Station,

approximately 20m beyond the site boundary to the east which is a public potable (drinking water) supply for Anglian Water Services Ltd. There is an Environment Agency Source Protection Zone, designated to protect groundwater destined for potable supply, relating to the abstractions from the borehole at Newspring.

The site is almost entirely accessible to casual visitors or trespassers. There is no evidence of potential ground contamination (eg. waste-tipping, burning, vegetation stress, unusual staining or odours) other than a small amount of oil staining on the concrete floor of the borehole shed and a small bonfire in the woods to the north. Records illustrate a disused landfill outside the application site to the north. It is probable that the woodland at Holme Grove covers the entire former landfill.

With regards to future baseline conditions, if the wind farm is developed, the predominant land use would remain as arable farmland. The turbines, access tracks and utility trenches would be the only change. In the context of the site, there are no plausible potential pollutant linkages, since the only potential contaminant source is a small former landfill outside the application site.

Key impacts for each stage of development are identified. These include dust or soil being blown onto nearby roads, piling affecting aquifers (if it is required), the deep foundations altering groundwater recharge regimes and the severing of land drains leading to changes in soil moisture and drainage conditions. In terms of mitigation, offsetting and enhancement measures the ES makes various suggestions. In general, industry good practise measures would be adhered to.

In terms of the consultation process, concerns have been raised with regards to the impact of the turbines' foundations and the fact that massive amounts of concrete will be required in the construction of the proposed wind farm. At the second round of consultation (for 10 turbines) concerns were also raised about the impact on local hydrology and aquifers, and it was suggested that the proposal would lead to flooding.

Anglian Water raise no objection to the proposal, provided that no piling work is undertaken. The IDB also raise no objection to the proposal, highlighting however that the development would need the Board's statutory consent. They suggest that planning permission is not granted without a condition requiring that the storm water design and construction proposals are adequate before development commences.

The Environment Agency have no objection to the proposal, subject to conditions relating to the following:

- Contaminated land

- No piling to be undertaken without written permission and the compilation of a Foundations Risk Assessment.

Conclusion (Impact on hydrology/ geology/ flood risk/ contamination)

The ES has sought to prove that, subject to mitigation measures, the residual effect of the development on local hydrology and geology would be insignificant; that the area is at low risk of flooding, which the development would not change; and that land contamination is unlikely to pose a problem.

Although concerns have been raised about local aquifers, with the implication that this has not been taken into consideration by the developer, the ES does in actual fact make reference to the underlying geology and the various aquifers underneath the application site, and how the development would impact upon the geology. The ES states that the majority of the site is underlain by a non-aquifer. From the ES and the consultation responses that have been received from the relevant consultees, it would appear that the main issue would be if piling is required to install the turbines. The developer has indicated that this is unlikely. Nevertheless a suitable condition could be attached to any planning permission granted to ensure that no piling takes place without the written agreement of the Local Planning Authority. This would mean that, if piling work is required, the relevant consultees could comment on the proposal again and have involvement with the works if desired.

Concerns were also raised with regards to flooding, because of the large amounts of concrete that are required to install the turbines. The ES notes that the turbine's foundations would be circa 20 square metres, with a concrete pad foundation to a depth of circa 2.5 metres. The amount of area covered by turbines is in actual fact relatively small; the foundations would cover less than 1% of the site area, as well as the access roads and cable trenches, which would represent a small additional impact. Taking into account the small amount of the site that would be covered by the foundations, access roads and cable trenches, combined with the fact that the site is not within an area liable to flooding, it is not considered that flooding would pose a problem.

Overall, subject to the conditions that have been suggested by the consultees, as well as conditions to ensure the suggested mitigation measures are implemented, the proposal is considered to be acceptable in this respect.

6. Cultural heritage and archaeology considerations. **Cultural Heritage**

The ES specifically refers to the potential impact on certain Listed Buildings, Conservation Areas, Registered Parks and Gardens and Scheduled Ancient

Monuments that are within a 10 km radius of the study area. Outside of this area the effects of the proposed development are considered to be of minor to no significance.

The mitigation measures which are suggested in this chapter mostly relate to the wider landscape visual effects of the proposal and there is not much detail on how to mitigate against the impacts on cultural heritage assets.

Archaeology

There are no nationally designated archaeological sites within the application site and it is not within a Local Authority defined Archaeological Priority Area. The Museum of London Archaeology was commissioned to undertake an archaeological evaluation of the site, in consultation with the Council's Archaeologist. Sixteen evaluation trenches were excavated across the site. The evaluation established that archaeological features do survive on the site, below the modern ploughsoil and most of the features appear to relate to agricultural activities. However, the overall lack of finds from the site means that the features are difficult to date accurately. Six of the trenches did not contain any archaeology.

It is noted that while the archaeological remains are undoubtedly of local significance there is nothing to suggest that they are of regional or national importance and there are no archaeological reasons to refuse the planning application. Further work, if required, could be carried out as a condition of planning consent and suggestions for such work include 'preservation by record' and archaeological monitoring of the excavation of the turbine bases.

Policy HE1 of PPS5 *Planning for the Historic Environment* notes that where conflict between climate change objectives and the conservation of heritage assets is unavoidable, the public benefit of mitigating the effects of climate change should be weighed against any harm to the heritage assets and their significance. With regards to designated heritage assets, Policy HE9 notes that there should be a presumption in favour of their conservation, with the more significant the asset, the greater the presumption in favour of conservation. If there is to be any harm to a designated heritage asset, the local authority must weight the public benefit of the proposal against the harm. Policy HE10 relates specifically to the setting of heritage assets. Local authorities should treat favourably applications that preserve those elements of the setting that make a positive contribution to or better reveal the significance of the asset. When considering applications that do not do this, local planning authorities should weigh any such harm against the wider benefits of the application. The greater the negative impact or the significance of the heritage asset, the greater the benefits that will be needed to justify approval.

Policy CS15 of the Core Strategy and Development Management Policies DPD affirms the Council's commitment to protecting, conserving and enhancing the district's heritage including its Listed Buildings, Scheduled Ancient Monuments, Conservation Areas, Registered Parks and Gardens and archaeology and their settings.

Concerns have been raised that the proposed wind farm would adversely affect the historic and rural landscape and that it would be visible from nearby conservation areas and in views of listed buildings. In response to the revised scheme for 10 turbines, concerns were also raised with regards to archaeology.

The Council's Conservation Officer acknowledges that assessing the balance between climate change and the historic environment and heritage assets is very difficult. He notes that, in many respects, the site is less constrained than other parts of the district and neighbouring authorities, and the turbines could be seen as ethically sound objects of interest and a representation of an alternative approach to counteract other development such as Heathrow's 3rd runway.

He refers to Policy HE1 of PPS5 and notes that the preserving test is hard to satisfy. Because there will inevitably be a degree of harm to the settings of heritage assets it is necessary to weigh the harm against the wider public benefits (in terms of climate change) that might derive from the development. The significance of the harm depends on the significance of the asset. On this basis, he notes that the Grade I and Grade II* listed buildings and registered parks and gardens and scheduled monuments are of great significance and the Grade II listed buildings at the Water Pumping Station are of significance by reason of their proximity to the application site.

He refers to a number of appeal decisions that centre around the subject of heritage assets. With regards to a Lancashire appeal decision, it was stated that turbines are not uncommon and can over time become an accepted part of the landscape, and that the harm they create is a matter of subjective opinion. Whereas some people might see turbines as overbearing or dominating, others might view them as an exciting landmark symbolising the region's commitment to renewable energy. Overall, he believes that, in the context of the national priority relating to climate change policy, the heritage asset restrictions on development of this site are not so significant as to be a principal determining issue in refusing the proposed wind farm.

English Heritage initially had reservations relating to Astwick and Edworth. However in response to the second round of consultation, for 10 turbines, they raised no objection. Some reference was still made to Astwick however they merely ask the planning authority to be satisfied that the wider benefits of the scheme outweigh the detrimental effects on the settings of heritage assets

before granting permission.

The Garden History Society and the Bedfordshire Gardens Trust both object to the proposal, stating that insufficient information has been provided to prove that the effects on nearby parks and gardens (both registered and otherwise) would be acceptable.

The Council's Archaeologist raises no objection. Although the construction of the turbines would undoubtedly have a negative and irreversible effect on heritage assets, this does not represent an over-riding constraint on development. This is provided that adequate provision is made to investigate and record any remains in advance of development.

English Heritage has produced a document entitled 'Wind Energy and the Historic Environment' in which it sets out 6 tests for the impact of turbines on settings and visual amenity. The 6 tests are as follows: visual dominance; scale; intervisibility; vistas and sight lines; movement, sound or light effects; and unaltered settings. These tests have formed the basis for assessing the impact of the proposal on the settings of nearby heritage assets.

Listed buildings

The following listed buildings are considered to have the highest potential to be affected:

- Pump House/Pump Masters House/Pumping station wall and gate piers, London Road (A1)
- St Guthlacs Church, Astwick
- Church of St George, Edworth
- Church of St Andrew, Langford

This is based on their Grade and proximity to the application site.

The Pump House, the Pump Masters House and the walls and gate piers are all Grade II listed. They are situated on the eastern side of the A1, approximately 1.4km south of the southernmost Biggleswade roundabout. These listed buildings are in very close proximity to the application site and the turbines would be far greater in vertical scale than the buildings. It is considered that the group of buildings is most attractive when viewed from the east and in such views the turbines would be dominant features in the background, appearing very high in the sky due to their proximity and the fact there are no other vertical features in the vicinity. There is no doubt that the pumping station site would be the worst affected of all the heritage sites being considered in this respect. In an appeal decision for the erection of 10 wind turbines at Long Bennington in Newark (appeal reference: APP/E2530/A/08/2073384), which was dismissed, the Inspector stated that,

“Even if ... only glimpses of blade tips would be seen, the setting of the house and grounds would neither be preserved nor enhanced” (para 47). He went on to state that, *“because of the heightened sensitivity of the eye to moving objects, it is my judgement that the setting and ambience of both house and grounds would be significantly harmed”* (para 47). In the case he was referring to the house was Grade I listed and the tower was Grade II* listed in its own right. Nevertheless, in line with the Inspector’s comments the impact of the moving turbines in such close proximity to the Grade II listed buildings at the pumping station is also considered to be poor. However, taking into consideration the buildings’ immediate setting (the A1), the impact is not considered to be so great as to warrant a refusal of the application, as the harm is not considered to outweigh the energy generation benefits of the scheme. The ES concludes that there would be no impact on the setting of the pumping station buildings and English Heritage did not raise any concerns either. The Council’s Conservation Officer does believe there would be some harm but acknowledges that it is necessary to weigh the harm against the wider public benefits that might derive from the development. On this basis, the impact of the development on these listed buildings and their setting is considered to be acceptable.

St Guthlac’s Church is located within Astwick Conservation Area, which is approximately 1.5km south of Edworth Road. The building is a Grade II* Parish Church. When standing in the churchyard the horizon is not visible due to substantial screening to the north. Now that the southernmost turbines have been removed from the proposal no turbines are likely to be particularly visible from the church or its grounds, although some views might be possible from the tower. The Astwick Conservation Area Appraisal Map does not specifically highlight any views towards the church as being significant and given the distance between the proposed wind farm and the church it is not considered that any special views between historic sites would be disrupted by the proposal. There is a possibility that the turbines might be viewed from the church tower. In an appeal decision for the erection of 10 wind turbines at Long Bennington in Newark (appeal reference: APP/E2530/A/08/2073384), which was dismissed, the Inspector made reference to a viewing tower at a nearby listed building, Belmont Tower (also Grade II* listed). He considered that a better view of the proposed wind farm would be possible from the elevated viewing tower and he did not consider restricted access as an important issue. English Heritage raise no objection to the proposal now the southernmost turbines have been removed and the ES assesses the impact on the church to be slight or no effect. On the basis that none of the turbines are likely to be visible from the church or its grounds, it is not considered that the Grade II* listed church or its setting would be affected by the proposal.

The Church of St George, a former parish church which dates from the 14th and 15th century and which is now redundant, is a Grade I listed building. The building is located to the south of The Manor in Edworth (the other side of the

A1 from the application site) and is not accessible to the general public. A footpath runs north to south to the west of the building, on higher ground than the church. The A1 and the application site are visible from this footpath but the only views available from the grounds of the church are likely to be the blades of the turbines (according to the ES), which would be seen rotating on the horizon. This is due to the fact the church sits on lower ground. Because the turbines would be so far away, and as a result of the intervening topography, it is considered that they would not appear too large against the church. In terms of the extent of the wind farm and the number, density and disposition of the turbines in relation to the church and its setting, not all of the turbines would be visible and the parts that would be visible are likely to be the turning blades as opposed to the entire structures. On this basis, it is not considered that the scale of the wind farm would have a detrimental impact on the church or its setting. Key views to the church are likely to be found looking eastwards from the nearby footpath or southwards from The Manor, in which case the wind farm would not be in these views as it is located towards the east. It is therefore not thought that the turbines would interrupt any key views or sight lines. Although there is some small cause for concern with regards to the movement of the blades and the relatively unaltered setting of the church, on balance the impact is not considered to be so severe as to warrant a refusal of the application, especially weighing any potential harm against the wider public benefits of the development. Furthermore, English Heritage and the Council's Conservation Officer have no concerns in relation to this listed building.

The Church of St Andrew, which is a Grade I listed building is located on the west side of the road in the centre of Langford. The ES does not refer to this church. Opposite the church is a school, which is formed of various single storey buildings of various ages and styles, with some gaps to allow views from the church and its grounds over to the east (the direction of the application site). The turbines would be far greater in vertical scale than the church but there are other vertical features (of various heights, although none as high as the turbines) located between the church and the application site, such as the railway infrastructure, and taking into account the separation distance between the church and the nearest turbines, it is not considered that the turbines would appear too dominant. The majority of views to the church would be along and from Church Street, and it is therefore not considered that the turbines would dominate any views. The church's immediate setting has been altered by the insertion of modern buildings in the vicinity and the turbines would therefore not detract from an unaltered setting. Neither the ES or English Heritage make reference to the church and although the Council's Conservation Officer does refer to the church and Langford's other listed buildings, he acknowledges that a balance must be made between the detrimental impact and the wider benefits of the proposal. On this basis, the impact of the development on this listed building and its setting is considered to be acceptable.

Conservation Areas

Taking into consideration the advice from the relevant consultees, and the information presented in the ES it is considered that the following conservation areas have the highest potential to be affected:

- Astwick
- Biggleswade
- Henlow

This is based on their proximity to the application site. The ES makes reference to Edworth having a conservation area however this is not the case and the listed church and its setting have been considered above.

Astwick Conservation Area includes the small hamlet clustered around St Guthlac's Church. The Conservation Area Appraisal, which was published in January 2009, makes reference to the extensive views northwards over the countryside, also making reference to the water tower at Toplers Hill which is visible in distant views. The Conservation Area Appraisal Map also illustrates significant views to the north, especially from Astwick Road. The ES addendum states that the removal of the southernmost turbines would minimise the visual effects on Astwick Conservation Area as no turbines are likely to be visible (although some might be visible from the church tower). The special distant views to the north are therefore likely to be undisturbed by the proposal. English Heritage raise no objection to the proposal and any impact on the conservation area is therefore considered to be acceptable.

Biggleswade Conservation Area encompasses the commercial heart of the town with Market Square at its centre. The Conservation Area Appraisal notes that there is no discernible setting to the north, south or east of the conservation area because housing and other development directly abuts the conservation area on these sides. However to the west is the River Ivel, water meadows and grazing land between the conservation area and the A1 which contribute positively to the conservation area's setting. The ES notes that the town of Biggleswade is physically separated from the farmland to the south by the embankment of the A1 which provides a strong visual barrier. The Zone of Theoretical Influence diagram also demonstrates the screening effects of settlements and blocks of vegetation, as do some of the photomontage viewpoints taken from the Biggleswade area. The turbines should not be visible from Biggleswade Conservation Area because it is surrounded by further built development and the Conservation Area Appraisal does not highlight any views to the south as being important. It is therefore not considered that the turbines would visually dominate Biggleswade Conservation Area. The only skyline feature highlighted in the Conservation Area Appraisal is St Andrews Church on Shortmead Street but it is not

thought that turbines would be visible in any views of the church. To conclude, the ES states that the proposed windfarm is likely to have a Minor Adverse to Nil significant effect on the setting of Biggleswade Conservation Area and this view is shared. This is on the basis that the turbines would not be visible from the conservation area.

Henlow Conservation Area includes the linear historic core of the village, which mainly comprises the properties either side of High Street from the Crown PH in the south to the recreation ground in the north. It also includes Park Lane and St Mary's Church at its most north-eastern point. The ES lists Henlow as one of the nearby settlements to have a designated conservation area but no assessment of the impact on the conservation area is made and it is unclear to what extent the turbines would be visible from the conservation area. One of the photomontages (Viewpoint 12) is taken from a footpath between Henlow and Clifton but this is not within the conservation area and the settlement of Henlow itself is seen as a visual barrier to the proposed turbines from this view as it sits directly between the viewpoint location and the application site. Henlow is mentioned in the section about residents within 2 to 5km of the proposed wind farm. The ES states that the wind farm's significance generally falls to moderate/minor within this range. English Heritage highlighted, in their initial response, that many of the viewpoints seem to have been chosen to illustrate publicly accessible places and not designated sites. The impacts on the settlement are described in terms of the impact on residents but there is no reference to the setting of designated sites.

St Mary's Church is a key heritage asset within Henlow Conservation Area but it is unclear what of the wind farm would be visible from its surroundings. The Conservation Area Appraisal highlights the view to the north-east (the direction of the wind farm) from St Mary's Church as being significant but it does not highlight views to the church as being significant. Nevertheless it is considered that any disruptions to views of the church would detract to some degree from its setting (which is classed as Important Open Space and includes a Significant Tree Group). Given the separation distance between the church and the application site it is considered that, if the turbines are visible, they would only be relatively small features in the background and their impact on the church's setting and key vistas and sight lines in the conservation area would not be so great as to warrant a refusal of the application on this basis, even if rotating blades are partly/wholly visible. Although the ES makes almost no reference to the impact of the proposed turbines on Henlow Conservation Area, EH did not express significant concerns about it, other than to berate the ES for its lack of attention to this issue. It is difficult to assess the potential, not knowing what of the wind farm would be visible from within the conservation area. Nevertheless, any potential impact is not considered to be so great as to warrant a refusal of the application. This is taking into account the wider energy generation benefits of

the scheme.

Registered Parks and Gardens

According to the ES, Grade I and II* registered parks and gardens are listed as having Very High Importance. It is considered that the following Grade II* Registered Parks and Gardens have the highest potential to be affected:

- Old Warden/ Swiss Garden
- Southill Park

Both parks are largely surrounded by woodland. One of the photomontages (Viewpoint 14) shows a view from Shuttleworth Agricultural College. This particular view illustrates that the turbines would not be visible due to screening vegetation. English Heritage note that although a photomontage has been produced from within the park at Old Warden which shows that views of the application site are partly screened by planting, there will be other views from the registered parks where views of the turbines are likely to be visible. The applicant argues that Viewpoint 14 is taken from within the grounds of Shuttleworth College to represent a typical view from the registered parkland landscape of Old Warden. No photomontages were submitted to show potential views from Southill Park. The ES highlights that Southill Park is the nearest registered park and garden to the application site. However it notes that the park is generally contained by woodland and is partly screened from views to the east by the village of Southill. On the whole, if the wind farm was visible on the horizon from either of the parks it would appear as a distant feature. Its scale would therefore not impact significantly on the setting of the registered parks and gardens or the buildings therein.

Some reference is made in the ES to the clock tower of Shuttleworth Mansion (a Grade II* listed building within Old Warden Park) because historically it would have been used as a viewing tower. English Heritage believed that potential views from the clock tower should have been considered as part of the ES, however the applicant states that they have checked with Shuttleworth College and understand that there is no general visitor access to the clock tower or balcony and that access is usually only granted for maintenance purposes. On this basis they suggest that, although the turbines would be visible from the clock tower, the receptors using the clock tower will be minimal. In an appeal decision for the erection of 10 wind turbines at Long Bennington, which was dismissed, the Inspector made reference to a viewing tower at a nearby Grade I listed building. He considered that a better view of the proposed wind farm would be possible from the elevated viewing tower and he did not consider restricted access as an important issue. He noted the following, *"I do not regard lack of public access as material to my considerations – it would be wrong to allow harm to a designed view that forms part of the setting and Registered grounds of a Listed Building simply*

on the basis of the present ownership and access regime, which may change over time” (para 47). He then went on to ponder whether this particular viewing tower was originally intended to be used as a viewing tower, concluding that it probably wasn’t. His view is nevertheless considered to be relevant to this application because the clock tower was used as a viewing platform in the past. Although English Heritage believed that potential views from the clock tower should have been considered, in the end they did not raise an objection to the impact on the setting of Shuttleworth Mansion and it is therefore considered that, if views of the turbines are indeed possible from the viewing platform (whether it is easily accessible or not), any detrimental impact would not override the energy generation benefits of the wider scheme.

The ES considers the overall effect on the settings to be Moderate/Minor Adverse. Although the Garden History Society and Bedfordshire Gardens Trust have objected to the proposal due to the potential impact on historic parks and gardens in the area, English Heritage raise no objection to the proposal, other than berating the lack of information provided, and the Council’s Conservation Officer also holds this view. Any impact on the settings of the nearby parks and gardens is considered to be acceptable, taking into account the wider benefits of the scheme.

Scheduled Ancient Monuments

In the ES, Scheduled Ancient Monuments (SAMs) are listed as having Very High Importance. The Ancient Monuments and Archaeological Areas Act 1979 contains no reference to setting. There is however no doubt that the desirability of preserving an ancient monument and its setting is a material consideration in determining planning applications, whether or not the monument is scheduled.

There are no SAMs within the application site itself. The ES discusses a number of nearby SAMs, concluding in many cases that buildings between the SAMs and the application site will act as visual barriers to the proposed wind farm. Taking into consideration the advice from the relevant consultees, and the information presented in the ES it is considered that the following SAMs have high potential to be affected:

- Stratton Park moated enclosure and associated manorial earthworks
- Astwick Bury moat and associated moated mound

With regards to Stratton Park moated enclosure and associated manorial earthworks, the Schedule of Monuments document, compiled by English Heritage, notes that the monument includes the remains of a medieval moated enclosure and adjacent manorial complex. The moat is identified with the original medieval manor of Stratton but was replaced as the main

residence when the lord of the manor moved to nearby Stratton Park House in the late 16th century. In terms of the assessment of importance, English Heritage note that around 6000 moated sites are known in England. Moated sites form a significant class of medieval monument and are important for understanding the distribution of wealth and status in the countryside. This site includes a fine example of a Bedfordshire moated enclosure, importantly associated with the well-preserved remains of contemporary manorial out-works and building platforms.

With regards to Astwick Bury moat and associated moated mound, the Schedule of Monuments document, compiled by English Heritage, notes that the monument includes the remains of a medieval moat and associated outer enclosure. English Heritage note that Astwick Bury is a well-preserved example of a Bedfordshire moat. It is unusual in having a subsidiary enclosure with a mound which may relate to the siting of alternative accommodation and a response to special water-management needs at this low lying monument.

At the Long Bennington appeal the Inspector made reference to an SAM within the application site and he referred to the “*ability to conceptualise the wider historic setting*”. It is difficult to assess the extent to which the proposed turbines would diminish people’s ability to conceptualise the historic landscape at any of the nearby SAMs to the application site but one would assume that the intervening buildings / other modern features already detract from the historic setting of the SAMs, more so than turbines in distant views would. On this basis, the effect of the proposal on the setting of nearby SAMs is considered to be acceptable.

Archaeological remains

The archaeological investigations carried out at the application site did not uncover any significant archaeological features, although there is always the possibility that some could be found during the construction phase of the wind farm if planning permission was granted. Provided that a suitable condition was attached to any planning permission granted to ensure that any archaeological finds are suitably recorded, in line with the guidance given in PPS5 and its associated documents, the proposal is considered to be acceptable in this respect.

Overall conclusion (Cultural heritage and archaeology considerations)

Overall, any harm to the historic qualities of those heritage assets in the vicinity of the application site would not be so significant and unacceptable as to outweigh the electricity generation benefits of the proposal. A key issue is the reversibility of a wind farm, at least in terms of the visual impact (if not archaeological impacts). Any detrimental impacts on the settings of nearby heritage assets would only be temporary in the long-term life of these assets.

7. Telecommunication considerations

Firstly the ES highlights that, during the scoping stage of the application, communications were classed as a primary issue as there is the potential for wind turbines to interfere with radio signals and also present a physical obstacle to microwave links.

Pager Power Ltd were commissioned to undertake an assessment of the proposals on communications and fixed radio communication links. Relevant organisations, such as Ofcom and local utility companies were consulted. Initially the companies were given an indicative layout of the wind farm and asked whether or not their links would be affected. If any potential conflict was identified, further analysis was carried out by Pager Power Ltd.

The Impact Significance was assessed on a scale ranging from Major to No Impact. There are a number of radio communications links in the vicinity of the proposed development. These include microwave links and UHF radio links used for communications, telemetry and telecontrol. The ES notes that the baseline conditions are not expected to change, without the proposed development.

With regard to design iterations, the layout of the proposed wind farm has been designed so as to avoid the calculated Fresnel zones of the beams, including a safety margin. There are no modifications to the design that would alleviate the impact on the links except by avoidance. It is noted that mitigation would be possible if any significant effects were found.

With regards to the potential impacts during operation, these are as follows:

- Interference with communication link systems because turbines reflect and block microwave link signals where they infringe on a transmission path.
- Turbines can affect analogue signals (eg. UHF and omni-directional) if near the direct path between the transmitter and receiver.

The ES notes that exclusion zones have been calculated in accordance with Ofcom guidance, however link operators also calculate their own exclusion zone criteria, which can be more onerous. The final layout for the wind farm takes full account of exclusion zones. The potential impacts on all of the abovementioned links was assessed as being negligible negative.

In terms of the effects during construction, the ES highlights that PPS22, BWEA guidance and Ofcom guidance all state that the effects of construction and decommissioning should not be considered (eg. cranes etc.). Nevertheless, the ES indicates that there would not be a problem; the effects would be similar to during the operational phase.

With regards to mitigation, certain measures have apparently been agreed privately with Anglian Water as they originally objected to the layout. No further mitigation is thought to be required because all the effects have been assessed as negligible negative.

There may be a need to address any GPS errors and therefore an additional fixed exclusion zone width of 25 metres has been applied. This is a precautionary measure and is standard practice. The ES notes that, in reality, the clearance distance between the proposed turbines and the nearest links is much greater.

The Companion Guide to PPS22 notes that a wind turbine can interfere with electromagnetic transmissions in two ways: either by emitting an electromagnetic signal itself; or by interfering with other electromagnetic signals. The document notes that there are a plethora of line of sight radio and microwave signals throughout England, including radio and TV links to local transmitters, telecommunication links and police and emergency service links. Generally, turbine siting can mitigate any potential impacts, as the separation distance required to avoid problems is generally a matter of a few hundred metres. In some cases, it may be possible to effectively re-route the signal around the development, at the developer's expense, to overcome the problem.

The document notes that scattering of signal mainly affects domestic TV and radio reception, and the general public may therefore be concerned that a wind farm will interfere with these services. However, experience shows that when this occurs it is of a predictable nature and can usually be alleviated by the installation or modification of a local repeater station or cable connection.

The British Wind Energy Association (BWEA) – Best Practice Guidelines for Wind Energy Development, which are aimed primarily at developers, note that in most cases technical problems with regards to telecommunications can normally be resolved. Pre-planning consultation with organisations such as Ofcom, local utility companies, the emergency services and any other interested authorities at an early stage is advised. It notes that communication system users should be approached for their views to see if technical solutions can be put in place.

In terms of the consultation process, some concern was raised about the possibility of the turbines interfering with the television signal from the Sandy television transmitter and assurance has been sought that the developers would take remedial action if any problems are caused. There is concern that related problems will not be discovered until it is too late.

There are also concerns about the impact on mobile phone signal in the area, as well as signals to and from the Topley's Hill Water Tower.

For both rounds of consultation (for 16 and 10 turbines) no comments were received from many of the consultees. The following paragraphs outline the comments made by those consultees who did comment on the proposal.

Arqiva owns and operates the UK terrestrial television broadcast networks and they are concerned about the integrity of those networks, which are in part reliant on Re-Broadcast Links (RBLs). RBLs are vital links in the broadcast networks to provide resilience and should therefore be protected from interference.

Initially Arqiva objected to the proposal for 16 turbines on the basis that the developer had not consulted them prior to submitting the planning application and the proposed wind farm is in the path of the RBL link between their television transmitter at Sandy Heath and the relay station at Kimpton. It was considered that the proposed wind farm might therefore cause serious disruption to a vital public service. Arqiva suggested that the developer contact them with a view to exploring whether the objection could be overcome. The applicant then commissioned a further report by Pager Power Ltd which addressed the concerns raised by Arqiva. This report concluded that the proposed wind development is unlikely to have any adverse effects on the RBL between Sandy Heath and Kimpton. In response to the 2nd round of consultation (for 10 turbines) Arqiva raised no objection to the proposal.

Both letters from Arqiva also directed the Council towards the web-based tool that the BBC have developed for developers to carry out assessment of interference to domestic television reception.

Orange did not respond to the initial consultation (for 16 turbines). At the 2nd round of consultation (for 10 turbines) they responded noting that there are no Orange microwave links affected by the application

The Joint Radio Company (JRC) analyses proposals for wind farms on behalf of the UK Fuel and Power Industry to assess the potential of these developments to cause interference to radio systems operated by utility companies in support of their regulatory operational requirements. In response to the first round of consultation (for 16 turbines) JRC did not foresee any potential problems. In response to the 2nd round of consultation (for 10 turbines) the JRC still raised no objection but noted that they cannot be held liable if any subsequent problems do arise.

In response to the first round of consultation (for 16 turbines) T-Mobile highlighted that Turbine 3 would be likely to affect one of their existing links. This was due to the distance from the affected link. However a later letter (in response to an additional report by Pager Power Ltd, commissioned by the applicant) confirmed that they raise no objection to the proposal. No response

was received from T-Mobile in relation to the revised proposal for 10 turbines. Given that they raised no objection to 16 turbines it can only be assumed they still have no objection to the scheme.

Conclusion (Telecommunication considerations)

The ES notes that the design of the wind farm has taken into account the local links and their safety zones and no objections have been received from any of the relevant consultees (although it should be noted that many did not respond at all). The proposal is therefore considered to be acceptable in this respect.

Much concern was expressed during the consultation period about television reception in the area and how this will be affected. The ES makes no reference to television reception. Ofcom were consulted but did not respond. Arjiva has directed the Council to the BBC's web-based assessment tool.

The BBC's tool is provided for guidance for wind farm developers and provides a rough estimate of the population that might suffer interference to their television services from a wind farm. The tool is not supposed to be a substitute for an on-site survey where the potential for disruption to television services may be assessed more accurately. The tool has been used (only using the grid reference point that is central to the site, as opposed to calculating for every turbine) and the results show that 3887 homes for whom there is no alternative off-air service would be affected (figure correct at 8.11.10). However, OFCOM in its report – "Tall structures and their impact on broadcast and other wireless services" August 2009, states:

Difficulties are usually, though not exclusively, evident on analogue wireless systems (digital systems are usually much more resistant to the effects of reflections) .

It should be noted that the analogue service for this area is due to be switched off in March 2011.

The guidance document, 'Onshore Wind Energy Planning Conditions Guidance Note', commissioned by the Renewables Advisory Board suggests that planning authorities should seek to resolve any issues prior to the granting of planning permission. However the guidance also suggests a generic planning condition that can be imposed to avoid or mitigate against possible resultant interference with systems such as domestic television broadcasts. The difficulty lies in determining whether the TV interference is as a result of the development. Therefore the condition should require a TV reception study to be undertaken prior to development. Such a condition would be in conjunction with a legal agreement which would require the developer to cover the cost of works required to rectify any adverse effects on

TV reception caused by the development. The applicant has confirmed that they would accept any such condition.

Overall, subject to a suitable condition relating to television reception interference, the proposal is considered to be acceptable in this respect.

8. Aviation considerations

The ES advises that radar for both military and civilian aviation use rely upon the transmission of electromagnetic waves, and air traffic control (in its broad sense) therefore relies upon these signals to track the movement of aircraft. Since the clear transmission of these electromagnetic waves requires slightly more than a direct line of sight due to atmospheric effects, large structures, such as wind turbines, can potentially interfere with signals. The physical height of wind turbines can potentially cause obstruction to low flying aircraft. This is an issue primarily in designated areas where either the turbines are situated within the safeguarded zone of civilian airfields or the turbines are situated in a notified Tactical Training Area, which the military use for low-flying exercises.

In terms of local Ministry of Defence (MoD) interests, the ES states that RAF Lakenheath is located 66km from the site to the north east, The National Air Traffic Service Ltd (NATS) Debden radar 34km from the site which the MoD use, and the commercial airport at Cambridge 32km away which is used for the maintenance of some military aircraft. More locally based, RAF Henlow is located approximately 4.5km to the south and has a licensed airfield comprising of four grass runways.

The development also lies partly under, and at the edge of the Controlled Traffic Area for Luton Airport. The ES confirms that this is a national designation which is available to pilots, and it indicates that the site falls well below the recognised movement areas for commercial aircraft.

Stansted Airport lies 37 km to the south east of the site, and was defined as being beyond the consultation radius, the CAA did not request consultation with the airport itself as the wider air traffic routes from Stansted being the remit of NATS.

The Shuttleworth Collection at Old Warden and the associated airfield is approximately 4.5 km from the nearest boundary from the site. The collection has a number of older aircraft including some with no radio which may use the surrounding airspace. The ES states that the airfield is unlicensed, like many smaller private airstrips, and therefore falls under CAA policy CAP 428. This recommends an area of radius 2000m from the centre of the runway which is clear of obstructions over 46m height.

The applicants have also identified a landing strip near Holme Court which

gained planning approval in 1986. Following discussions with the former users and the landowners (Central Bedfordshire Council) that the landing strip is no longer in use, and that the lease which was in place will be terminated by both parties. The nearby helicopter pad is also no longer in use and will be covered by the termination of the lease.

The MoD raised concerns regarding two of the turbines associated with an earlier pre application layout for 20 turbines due to the impact on the radar at Cambridge Airport, and on this basis the ES views the impact on MoD interests as being Minor Negative Impact. However, both the above mentioned turbines are not part of this proposal for 10 turbines and given the latest response from the MoD it is considered that the impact on the radar at Cambridge airport is no longer a concern.

In terms of RAF Henlow the ES states that the proposal would have a neutral impact on this airfield. As both RAF Henlow and the MoD have raised no objections to the proposal, the development should not have an adverse impact on the safety of aircraft using that airfield.

The ES advises that the proposal would have a neutral impact on Luton Airport. Given that the operators of the airport, the CAA, NATS and NERL (who are responsible for enroute air traffic) have raised no objections to the proposal, it is not considered that the proposal would have an unacceptable impact on the safety of aircraft using Luton Airport.

A NATS report regarding the impact on Stansted Airport and on eleven radar sites stated that one of the turbines on an original layout of 20 would cause effects on Stansted primary radar and on its ability to detect small aircraft. No objections were raised to any of the other turbine locations. As the turbine in question is no longer part of this scheme, and given the response received from NATS as part of this planning application, the impact on the Stansted and the radar sites is considered to be acceptable.

The ES outlines that Old Warden Airfield is situated outside the radius at which special requirements tend to apply. However, the standard 'Rules of the Air', suggest that pilots must maintain visual awareness and keep at least 500ft above ground or any fixed structure. If constructed the wind farm would be marked on air charts and pilots would be obliged to maintain separation. Given that the proposal would represent an extra obstacle for pilots, but that they would need to be aware of the development under the 'Rules of the Air', the ES considers the development would arguably have a Minor Negative Impact upon the use of Old Warden Airfield.

The Council has received two letters of objection on behalf of The Shuttleworth Trust regarding the impact on the proposal on the private Old Warden Airfield, which operates licensed events on a number of days in the

year. The letters advise that the aircraft which use the airfield are of significant historical value and due to their type and design are limited in their manoeuvrability both laterally and vertically. Flight testing is undertaken which requires that obstacles are kept to a minimum. Also within their fleet are fast jet/fast prop aircraft for which the proposed turbines will pose very significant flight safety issues. The height of the blade tips will considerably exceed the obstacle clearance levels for the airfield, and the overall risk for the airfield arising from the proposal will mean a serious risk to aircraft and persons. The turbines would potentially interfere with the display area for the airfield, and the cumulative impacts of the aviation activity in the area and the effect on the wind turbines on a pilot's navigational activity cannot be underestimated. The letters also advise of plans to extend the runway to 958 metres in the future.

The applicant's aviation consultant has considered the comments made by The Shuttleworth Trust. They have assumed that the runway has been extended in making their response, and state that such an airfield would be entitled to physical safeguarding to 3600 metres from the Aerodrome Referencing Point (ARP). The nearest turbine from the ARP is 5000 metres away well clear of any safeguarding restrictions. They state that aircraft flying visually are required to avoid obstructions on the ground by a specified distance, and this would include a wind turbine or other ground obstruction. In terms of display events, the applicant's consultant outlines that there is no requirement for display areas to be physically protected. He goes on to say that any display by professional aviators requires considerable preparation and planning, and takes into account any obstructions in the area. The turbines would also be marked on aviation charts which conform to a strict updating regime. In terms of the design and manoeuvrability of the aircraft, it is stated that all aircraft must conform to CAA requirements regarding safety and operation. The response on behalf of the applicant concludes that there is little of substance in the letter from The Shuttleworth Trust that would prevent the granting of planning permission for the proposal.

The Council has considered the objections from The Shuttleworth Trust very carefully, and have also assessed the response from the applicant's aviation consultant. The Trust have been unable to demonstrate in their comments that the proposal would be contrary to any CAA policy, and it is not therefore considered that the proposal would present an unacceptable safety risk to aircraft using Old Warden Airfield.

Cranfield Airport is owned by Cranfield University and they have written and objected to the proposal on a number of occasions. Their main concerns relates to plans they have to install primary radar on the airfield in the next three years for both area control and surveillance approaches. Cranfield University state that they have had discussions with the CAA and NATS well before the submission of the application for the wind farm. NATS advised that early operations would result in delays to Cranfield air traffic but it was agreed

that it was reasonable to expect these to reduce with the introduction of radar, which is viewed as being essential to the efficient and safe operation of the airport. Cranfield University state that the applicant accepts that the turbines would be visible to any future radar, and that they object to the proposal until a full radar assessment has been undertaken. They go on to say that planning permission has been granted recently for additional aviation facilities at the airport, and radar facilities will be required to support the aircraft associated with the airport.

It is stated that based aircraft owners and an extensive flying training school undertake the majority of current operations at Cranfield. There are a number of fixed based operators with business jets along with a small number of research flights associated with the university. The contribution of the airport to the local economy is also highlighted, and the existing planning permission is a material consideration to be taken into account in relation to the proposed wind farm.

In response to the above objections, the applicants aviation consultant confirms there is no disputing the position that should the turbines be constructed, and Cranfield Airport at some point in the future decide to install a radar, the turbines would appear as clutter (unwanted radar returns). However, there is no evidence as to how the airport would consider operating such radar, and it is understood that as yet there is no proposal or planning application for a radar approach room, nor a plan to recruit and train radar approach controllers. The consultant goes on to state that there is no coherent proposal or requirement document the public domain that defines how any such radar would be operated or why it is needed in an area that is already well served by a network of radars under the auspices of the NATS Terminal Control North (TC(N) and Farnborough (North) Lower Airspace Radar Service (LARS).

The comments received from Cranfield University have been considered along with the response made by the applicant. As currently a non-radar equipped airfield with a runway in excess of 1100 metres, there is no requirement for it to be consulted on a development in excess on 17km away. Indeed the proposed wind farm is over 25km from Cranfield Airport. There is no evidence to indicate that the proposal would have an adverse impact on the current operations at the airfield. Whilst there appears to be an intention at some time in the future to install radar, it also appears that the plans for the radar are not well advanced. Whilst Cranfield University have indicated that they have had an outlined consultation with the CAA in terms of working towards the installation of radar, it is understood no formal details of the proposal have be submitted and there is no indication of the timescales involved for its implementation. In these circumstances the refusal of the application on account of the objection made by Cranfield University is viewed as being unreasonable, particularly as radar at Cranfield Airport has not been

stated as being essential on grounds of safety at the present time, and when weighed against the benefits the proposal would give in the production of renewable energy.

Conclusion (Aviation)

It is not considered that the proposal would have an adverse impact on aviation safety. The MOD, CAA, NERL, NATS and London Luton Airport have all raised no objections to the proposal. The objections from The Shuttleworth Trust and Cranfield University have been assessed in detail, and the issues raised do not provide a reasonable basis for refusing the application.

9. Socio-economic considerations

The ES highlights that any development can result in both direct and indirect economic benefits on local and regional economies, and wind energy projects are no different. Whilst in no sense a material planning consideration per se, the total cost of proposal to the applicant is given as around £27 million, and it is expected that approximately 30% of this amount will be spent within the region on construction and electrical works. In addition, components of the wind turbines may be sourced from the UK subject to competitive review. The proposal is likely to require a labour force of up to 50 during the nine month's main construction period. Thereafter there will be an average of approximately 2 full-time employed in the long term on supervision and maintenance.

The ES considers the socio economic impact of the development in some detail, and looks at the potential impacts on public access, local recreation, local economy, tourism, public perception, and on property values.

In view of the details of the cost and employment generated by the proposal, the ES considers that the scheme would have a positive impact on the local economy, and this is considered to be a reasonable assumption given the details of the proposal. The applicants has provided details regarding the impact of wind farms in other parts of the country which tends to show that such developments do not have a negative impact on the tourism value of an area. There is no evidence available to show that this proposal would have an adverse impact on tourism. In addition, the public perception of this scheme is outlined elsewhere in this report and requires no further comments here. Whilst the ES discusses survey work regarding the potential impact of wind farm development on property values, it is a long established principle that this is not a material planning consideration.

Given the amount of investment in this proposal, it is considered that there would be a positive impact on the local economy as a result of the development, and in accordance with PPS22 this positive benefit should be given significant weight in the determination of the application.

10. The effects upon the enjoyment of the countryside by members of the public, including those using local rights of way

A very small reference is made in Chapter 3 (Site Selection, Design, Description and Consultation) of the ES to the fact that the preferred separation zones in relation to bridleways and footpaths are 100 and 40 metres respectively. Otherwise, the subject of public rights of way and the effect of the development on their users is mostly covered in Chapter 4 (Landscape and Visual Assessment) of the ES, albeit briefly.

A number of footpaths and bridleways cross the application site and therefore walkers and horseriders will pass within close proximity of the turbines and experience a high sensitivity to the development. There is also the possibility that the turbines might become an attraction, thereby increasing the number of walkers on the site. Nearby recreational paths of national importance include the Greensands Ridge Walk 8km to the north-west of the application site, and National Cycleway No. 12 within 3 km of the south of the site.

The ES discusses visual receptor sensitivity. With regards to walkers and horseriders it notes that users of strategic footpaths, cycle routes or rights of way, where attention is focussed on the landscape, have a high sensitivity. Walkers using local networks of footpaths and tracks have a medium sensitivity.

A number of the submitted photomontages illustrate how the turbines would be viewed from surrounding footpaths and bridleways. Overall the ES notes that, once outside the application site, the sensitivity is much reduced due to the visual barriers of the A1 and the railway and due to the distances involved. The effect for walkers in the Chilterns is assessed as being Minor to None.

The Design and Access Statement notes that public access to the turbines themselves is not necessary, although there is the possibility of providing secure and conducted visits to one or two of the turbines for educational purposes in the future if required. This would depend on further discussions with the Local Planning Authority. The document notes that the rights of way themselves would not be affected but users of them might be to some extent.

The Companion Guide to PPS22 gives the following recommendations in relation to separation distances:

- Roads/railways – At least fall over distance is advisable.
- Bridlepaths – 200 metres (although this is not a statutory requirement)
- Public Rights of Way - Fall-over distance is considered to be acceptable and the minimum distance is often taken to be that the turbine blades should not be permitted to oversail a public right of way

PPG 17 *Planning for open space, sport and recreation* notes that rights of way are an important recreational facility, which local authorities should protect

and enhance. Local authorities should seek opportunities to provide better facilities for walkers, cyclists and horse-riders, for example by adding links to existing rights of way networks.

Policy CS17 of the Council's Core Strategy and Development Management Policies DPD specifically notes that, "*Development that would fragment or prejudice the green infrastructure network will not be permitted*".

Varied concerns regarding this issue were raised through both rounds of consultation (for 16 and for 10 turbines). Many objectors highlight that the local footpaths and bridleways are currently well used but they feel that in the future it will no longer be enjoyable to visit the area for walking and horseriding. This is due to the extra precautions that people feel they will need to take (for example, falling ice from the blades was mentioned) and the fact that the whirring of the turbines will ruin the local tranquillity. The disruption caused during the construction period was also mentioned.

On the whole it is felt that, although people are encouraged to lead healthy lifestyles and to get outdoors, the development would prevent people from doing this in their immediate local area.

The risk to animals, such as horses and dogs was also raised. It was suggested that horses will bolt when taken in close proximity of the turbines which would be dangerous.

The Council's Rights of Way Officer noted that there are 3 main axes of public bridleways across the application site. Initially he felt that the turbine layout would have a detrimental effect on the value and usability of the rights of way network for equestrian users due to the location of the turbines in relation to the bridleways. The Rights of Way Officer referred to plans that were underway to increase connectivity within the cycle and equestrian network at the application site by means of a permissive bridleway extension, which the proposed development would conflict with.

The Rights of Way Officer has requested that, if the required separation distances are not achievable then an arcing permissive route should be created to the north of the present Bridleway 52 to provide less experienced riders/riders with nervous horses with an alternative route around the turbines. It was also suggested that a further permissive route to the south is created to provide greater connectivity for the local bridleway and cycling network and to provide greater road safety for riders and cyclists.

The Rights of Way Officer also made other requests relating to improvements to the existing Rights of Way infrastructure. Reference was made to the Outdoor Access Improvement Plan, Local Transport Plan and the Bedfordshire and Luton Green Infrastructure Plan and how the suggested

measures would help realise their aims. A request was also made for the Rights of Way networks not to be affected by the construction work on site.

Two Rambler's Association representatives were consulted (Langford and Biggleswade) and they submitted a joint response. They request that planning permission is not granted for the proposal unless it is subject to the provision of the two proposed routes suggested by the Rights of Way Officer, with the routes made public rights of way as opposed to permissive bridleways. They also request other improvement works to the existing Rights of Way infrastructure through a Section 106 agreement.

The British Horse Society object to the proposal on the basis that the proposal would affect the enjoyment and safety of riders. Reference is made to the BHS standard guidance which states that a separation distance of 3 times the overall height of any turbine should be the target for normal routes, with the 200 metres stated in PPS 22's companion guide being a minimum where it is shown in a particular case to be acceptable. A number of the turbines do not accord with their guidance.

The BHS believe that factors such as moving blade shadows on the ground, noise, ice throw or collapse of all/part of the turbines would affect horses. They also believe that there is a risk to riders and other users of the rights of way. A survey undertaken by the BHS found that 5 riders (out of 19 who had ridden close to wind turbines) fell off their horse and 3 of them required hospitalisation. Those who had not fallen off were riding horses accustomed to turbines or steady, older horses.

The BHS queried some aspects of the ES and Design and Access Statement. With regards to the claim that only experienced horseriders would be in the area due to the access constraints of the A1 and the railway, the BHS state that most people have horse transport nowadays and therefore they do not necessarily ride in the area they live. They also highlighted that there are many local livery yards. With regards to the proposed permissive bridleways, the BHS endorsed the circuit route.

In response to the BHS letter the developer made the following (summarised) comments:

- The provisions of PPS22's companion guide have been met.
- The development area is considered to be of low interest to riders (other than those living adjacent to the site) because of the natural blockages of the A1 and railway. There are no bridleways crossing the A1 and the 3 crossings over the busy railway are unmanned with obvious dangers to users. Network Rail's Route Utilisation Strategy for the East Coast Mainline (Feb 2008) indicates that minor level crossings will be closed in the future. The future prospects for riding on the application site therefore look to be limited.

- There are many other bridleways in the area which are promoted by the BHS.
- PPS22 states that wind turbines are a very safe technology with few reports of accidents.
- PPS22 states a set-back distance from roads and railways of fall-over distance.
- The BHS's suggested 200 metre exclusion zone is not a statutory requirement.
- Due to the nature of the BHS response it is felt that the permissive route should be a footpath and cycleway only.
- The BHS objects to some of the turbines (which are in excess of 500 metres from bridleways, on the basis of enjoyment, which is subjective).
- Wind turbines do not make sudden movement.
- Noise – more noise will come from traffic/trains
- No evidence of strobe effect (which is different to shadow flicker).
- The BHS refer to a survey which showed 5 people fell off their horses. However this represents a very small proportion of the 67000 membership of the BHS. Other research shows indifference to wind farms by riders, which the BHS fails to recognise.
- An example is given of a wind farm in Cornwall where the land is still used as a breeding centre and showground for horses.
- No proof given as to how many horseriders visit the area with horse transport.

The agent also enclosed a statement by the British Wind Energy Association which indicates that wind energy and equestrian activities can co-exist side by side. The statement notes the following:

- Horses are scared by many things, such as litter in hedgerows and traffic, however they quickly become accustomed to unfamiliar things in their environment.
- Proximity to bridleways is not necessarily an issue if clear advance views of the turbines are afforded to both horse and rider. Warning signs on the approach might be beneficial.
- Shadow flicker is only likely to occur for a very short period of time during the whole year. The effect is therefore negligible.
- There are examples of equestrian activity adjacent to wind turbines.

Network Rail have confirmed no objection in principle to the proposal. In response to the second round of consultation, for 10 turbines, they requested that Turbine 7 be moved further away from the sightline of the level crossing to minimise the potential for distraction to level crossing users. The opinion that this turbine might distract users of the crossing is considered to be very subjective, and this turbine has already been moved to provide a greater buffer zone for bats. It is not considered necessary to move this turbine again given that it is some 740 metres from the turbine.

The ES and the additional report commissioned by the applicant illustrate that the turbines will only be visible from publicly accessible parts of the Chilterns Area of Outstanding National Beauty in clear conditions, and then only as minor features in the landscape. The Chilterns Conservation Board therefore feel that any impact on the AONB arising from the proposed development is likely to be moderate/minor or neutral. The Board is also able to clarify that the impact of views of the AONB from publicly accessible parts of the countryside to the north-west, north and north-east of the site will be nil or minor.

Conclusion (The effects upon the enjoyment of the countryside by members of the public, including those using local rights of way)

The main 2 impacts to users of local rights of way are the visual impact and safety. The visual impact of the turbines is discussed in more detail elsewhere in this report. Overall, it is considered to be acceptable. In fact it is suggested that the wind farm might prove to be an attractive landmark in the future.

With regards to the safety aspect, the ES seeks to prove that the effect on the users of local rights of way would be acceptable, especially through mitigation measures, such as providing permissive routes and by not allowing construction work to obstruct the rights of way themselves.

With regards to the suggested separation distances given in the companion guide to PPS22, the turbines would be at least fall over distance from roads and railways, as advised in the companion guide. However Turbine 1 would be within approximately 75 metres of a bridleway, Turbine 2 would be within approximately 87.5 metres and Turbine 3 would be within approximately 100 metres, whereas the companion guide recommends 200 metres. However it does note this is not a statutory requirement. With regards to Public Rights of Way, fall over distance is considered be acceptable, although the minimum distance is often taken to be that the turbine blades should not be permitted to oversail a public right of way. On the basis that the turbines adhere to the guidance in the companion guide, albeit to the minimum standards suggested rather than the preferable standards, the turbine layout is considered to be acceptable in this respect.

Concerns have been raised that walkers and riders who currently enjoy using the area will be discouraged from using it during the construction period and then during the operational phase of the wind farm because of fears for safety. If it was considered that the wind farm would give rise to lower levels of walkers and riders using the area then planning permission should not be granted, in line with Policy CS17 which discourages development that would fragment or prejudice the green infrastructure network. Similarly, PPG17 promotes rights of way as recreational facilities and it states that local authorities should seek opportunities to provide better facilities for walkers,

cyclists and horse-riders, for example by adding links to existing rights of way networks. The developer has suggested the provision of permissive routes which would enable alternative routes to be taken across the site. This would particularly benefit horseriders with nervous horses and it would also undoubtedly benefit the area's Green Infrastructure network, thereby realising the aims of the Outdoor Access Improvement Plan, Local Transport Plan and the Bedfordshire and Luton Green Infrastructure Plan, and also according with the aims of Policy CS17 of the Council's Core Strategy and Development Management Policies DPD and PPG 17.

Much of the discussion with consultees surrounds Plan A, submitted by the Rights of Way Officer. By way of explanation, the agent's plan illustrated a proposed permissive link on Council owned land which would run north to south along the back (western edge) of the pumping station, then along the western edge of the A1, before heading west (just north of Bleak Hall Cottages) and then south again towards Edworth Road. Plan A shows a route which would run southwards from Biggleswade BW52 footpath (near the pumping station) along an existing watercourse before turning east to link to the Topley's Hill flyover. Additionally a proposed short permissive bridleway would link the proposed north-south route to Langford BW8. If the application was otherwise considered to be acceptable, the provision of the new permissive routes could be a condition of any approval granted. The Rambler's Association expressed a desire for the proposed permissive routes to be public rights of way as opposed to permissive paths. This is not considered to be necessary given that an appropriate condition would ensure the paths provision and retention.

Concerns were also raised with regards to the risk that the development poses to animals such as horses and dogs. The BHS put forward arguments to suggest that horses react badly to turbines, however the applicant has provided evidence to the contrary. The guidance given in PPS22 and its companion guide, as well as other documents, does not suggest that turbines should pose a problem to animals. PPS22's companion guide makes reference to the BHS's suggested exclusion zone around bridlepaths but the document acknowledges that the figure is a desirable figure rather than a statutory requirement. On balance, although the separation distances requested by the BHS have not been achieved the agent has confirmed that the layout does accord with guidance given in PPS22's companion guide and it is therefore considered to be acceptable in this respect. Furthermore, the provision of permissive routes across the site would allow for alternative routes to be taken around the turbines.

To conclude, it is considered that subject to the provision of a permissive route(s), the development would be acceptable in this respect. The provision of the additional permissive route would benefit the local area's Green Infrastructure network, to the benefit of local people.

11. Traffic generation and access considerations

The ES notes that an access assessment was undertaken by Entec UK. The exact turbine model has not yet been confirmed but for the purposes of the assessment it was assumed that the blades would have a length of 45 metres. The critical elements to the study are the vehicles for the nacelle and blade set. This is due to the weight, height, width and length restrictions. The study assumes that 1 blade will be mounted on an extendible trailer with a vehicle width of 2.5 metres. The ES sets out the critical highway parameters for determining the feasibility of delivering equipment, although the figures are merely a guideline with some scope for change.

The desk-based study that was undertaken identified all the possible routes to the site. The routes were identified from the nearest trunk road based on consideration of the road type, topography, settlement patterns and published height restrictions. After the desk-based study, visual inspections were undertaken. These looked at the horizontal and vertical alignment of the roads and note was taken of height/weight restrictions and gradient constraints. The preferred route was chosen based on consideration of the upgrading works required and the requirement for 3rd party land.

On Route 2 (the chosen route), vehicles would travel northwards along the A1. They would exit the A1 and continue along to Edworth Road. The vehicle would undertake a straight-ahead manoeuvre across the roundabout and then travel along Edworth Road. They would then enter the site to the north.

There would be 3 types of traffic during the construction period: abnormal loads; conventional HGV movements; and vans/cars. The Council (as Highways Authority), the Highways Agency and the police would be notified in advance of any abnormal vehicle movements and other vehicles would be routed as agreed with these consultees in order to minimise disruption and disturbance to nearby residents. The delivery times would also be restricted so as not to coincide with commuter and school traffic and also not to conflict with farm activities.

Depending on the model of turbine which is chosen there would be between 64 and 84 abnormal loads coming into the site. Many of the long vehicles would be able to reduce in length for their return journey. In total it is estimated that, aside from unconventional vehicles the total number of HGV vehicle arrivals would be approximately 2,500 for the whole construction phase. These would be spread over a period of 9 months, giving an average figure of less than 14 HGV vehicle arrivals per working day. A likely maximum figure for any given day would be 70 HGV arrivals. There would be roughly 30 to 50 construction workers on site at any one time and various deliveries would be made in light vehicles from a range of directions, which should not create any noticeable impact. During the operational phase of the wind farm

site maintenance personnel vehicles (conventional passenger vehicles) would visit the control building daily.

The Companion Guide to PPS22 notes that road access to a wind farm site will need to accommodate trailers sufficiently long/strong to carry the turbine components and amendments to existing roads may be required to gain access. Furthermore on-site tracks need to meet the necessary weight and dimensional requirements. These tracks may be left in-situ for the life of the wind farm or they may be retained in a reduced state. In either case there will be a need for the tracks at the decommissioning stage and for ongoing maintenance needs.

With regards to this additional traffic, the document notes that whilst the traffic generated might not differ significantly from other construction projects, wind farm sites are often served by a minor road network. If this is the case, the local authority can control the number of vehicle movements to and from the site and also the route of such movements. Once the wind farm is operational the document notes that traffic movements to and from the site are likely to be light.

Many of the objection letters made reference to the heavy traffic that will be generated during the lengthy construction phase and the fact that associated road closures will cause disruption to local road users. Several letters highlight that Langford residents do not wish for traffic to use the village for access to the site and there is a general feeling that the existing road infrastructure in the area is not suitable for the pressure that will be put on it as a result of turbine component deliveries. It is questioned whether Edworth Road is a suitable place from which to access the site.

The Council's Highways Team initially queried some aspects of the ES. For example, there was a discrepancy between the written text of the ES, which stated that no particular access point to the site had been decided upon, and one of the plans which illustrated an access with an annotation that reads 'Entrance splays to County Highways requirements'. It was confirmed that if this access is to be used it will be possible to have the required vision splays as the land is in the applicant's control or forms part of the public highway. Some vegetation will require removal to achieve this.

With regards to the impact on Edworth Road, the Highways Team highlight the fact that the swept path analysis indicates that the vehicle will overhang the roundabout's splitter island and the highway verge on the southern side of the carriageway. No proposal to deal with these effects has been submitted but the Highways Team believe that the issue could be dealt with by a condition requiring localised widening of the road. With regards to construction traffic, the Highways Team endorse the production of a Traffic Management Plan and they have confirmed that the surrounding highway

network has the capacity to accommodate the additional traffic. They have suggested various conditions.

Once the applicant had demonstrated compliance with their standard advice note for wind turbines situated near to trunk roads the Highways Agency confirmed no objection to the proposal. Network Rail have also confirmed no objection in principle to the proposal, noting that use of the preferred Route 2 would mean no impact on the railway infrastructure.

Conclusion (Traffic generation and access considerations)

Although many objection letters make reference to the heavy traffic that will be generated throughout the construction period, the Council's Highways Team believe the surrounding highways network has the capacity to accommodate the additional traffic and the ES has confirmed that delivery times would be restricted so as to avoid commuter, school and farm traffic where possible. Local road users should therefore not be detrimentally affected by the construction period to any significant degree.

Concerns were raised about potential road closures. Although delivery of the nacelle and blades might have some impact on the local road network, the majority of deliveries to the site would be by normal-sized construction vehicles which the road network could accommodate. Therefore any impact to local road users is judged to be acceptable, especially because the impact would be focused around the Edworth Road/A1 junction area and there are alternative (albeit slightly longer) routes from Langford to the A1 which could be used if necessary for short periods.

Many Langford residents do not wish for traffic to use the village for access to the site. Route 2 is the preferred route and the Council's Highways Team, the Highways Agency and Network Rail all support the use of this route, which does not affect the village of Langford. A suitable condition could ensure this route is used.

With regards to the suitability of Edworth Road for access, the results from the study by Entec show that no engineering works are likely to be required to facilitate delivery of the turbine components (for either of the 2 preferred routes). The Highways Team have referred to the need to undertake some minor alterations to Edworth Road but this could be achieved through a condition.

Overall, subject to conditions the proposal is considered to be acceptable.

12. Construction and decommissioning phases

The ES notes that the expected operational life of the wind farm would be approximately 25 years. At this point all the visible, above ground structures

could be removed from the site which would take about 2 months. There is the possibility of seeking new consent for new turbines. However, if required, the upper sections of the foundations could be removed to a depth which would allow the continuation of agricultural activities. Alternatively, the foundations might be left in place. The ES also notes that, unless otherwise requested, the additional on-site access tracks could be removed and the area reinstated. The control building would also be removed as would the crane hardstanding areas adjacent to the turbines with the ground being reinstated. Underground cables would remain in place.

The key potential impacts of construction, maintenance and demolition activities are as follows: noise and vibration; airborne pollution; hazardous materials; and transportation. Subject to mitigation measures and through adhering to the relevant British Standards, the ES states that the overall potential effect is considered to be minimal or neutral.

The Companion Guide to PPS22 refers to the disturbance caused during the construction phase of a wind farm, noting that the degree of disturbance will depend on the amount of turbines and the length of the construction period. It highlights that public perception will depend on the physical impacts and traffic movements.

The British Wind Energy Association (BWEA) – Best Practice Guidelines for Wind Energy Development, which are aimed primarily at developers, note that developers should consider the production of and compliance with method statements for construction and that mitigating measures can often be provided for in Environmental Management Plans.

In terms of the consultation process, many letters question what will happen to the turbines in the future. It has been suggested that the nation might come to believe that wind farms should be abandoned and that the developer should be asked for a firm guarantee that if and when this installation falls into disuse they will remove all their equipment and return the land to its current state.

Reference is also made in the objection letters to the dirt and dust that would be stirred up during the construction period and the effect this would have on nearby Langford. There are also concerns amongst local people that construction work might go on during the night, thereby causing increased disruption. Concerns were also raised about parking for construction workers, which might congest nearby residential streets.

The Council's Highways Team raise no objection to the proposal subject to conditions and the Highways Agency also raise no objection. Network Rail has also confirmed no objection in principle to the proposal, noting that use of the preferred Route 2 would mean no impact on the railway infrastructure.

Conclusion (Construction and decommissioning phases)

Concerns have been raised that the wind farm will fall into disuse and there is uncertainty as to what will happen to the turbines in the future. As noted, the ES indicates that the likely lifespan for the wind farm is 25 years, and on cessation of wind farm operations all major equipment and structures would be removed from the site, which takes about 2 months. It is possible to attach a condition to any planning permission granted to ensure that the turbines are removed after a certain period (for example, 25 years from the date planning permission is granted/the date that the turbines start to generate energy). Another condition could also be attached to ensure that if any of the turbines cease to operate for a continuous period of a certain time (for example 6 months) they should be removed, unless otherwise agreed with the Local Planning Authority. This would prevent a situation whereby unused turbines are left on site creating unnecessary visual clutter. The ES highlights that maintenance work would be undertaken on faulty turbines as quickly as possible to avoid downtime so it is not thought likely that this situation would arise.

With regards to the dirt and dust which may result from construction activities, the ES states that the nearest sensitive receptors are sufficiently far away as to make the effects minimal. Nevertheless, mitigation measures are suggested, which could be secured by condition.

In terms of parking for construction workers this could be secured by a condition and could be accommodated within the application site. This would discourage construction workers from parking in Langford.

In terms of operating hours, the ES states that these would be 7am to 7pm on weekdays and 8am to 6pm on Saturdays. This could be conditioned, thereby preventing any noisy/disruptive work going on during the night.

To conclude, subject to appropriate mitigation conditions, the proposal is considered to be acceptable in this respect.

13. Any other implications

The applicant has recently submitted an information pack to members of the committee. This pack gives details on the background to the proposal and information regarding The Co-Operative Group. In addition, the applicant has undertaken a telephone survey of 1000 residents in Central Bedfordshire in order to get what is termed as a true reflection of the opinions towards the proposal. The sample interviewed was disaggregated by ward and by demographics, and is considered by The Co-Operative Group to be a reliable reflection of opinion of residents, and it indicates a clear high level of support for the proposed wind farm. A summary of the findings is outlined below:

- The strength of opinion, including in support of the proposal, was stronger in the wards closest to the application site
- Few people would see the wind turbines regularly, and nine out of ten of those who would, is from the A1 and/or on their way to work; and
- More generally, it is clear that residents feel strongly about the environment and the need to tackle climate change, and most believe Central Bedfordshire should play a role in this.

A number of community benefits were also discussed and this included:

- A community trust would be established for Langford and Biggleswade to support local environment, energy efficiency schemes and educational projects/facilities
- An environmental education programme would be established. This would be similar to the 'Energy Works' scheme which is an integral part of The Co-operatives wind farm in Coldham, Cambridgeshire and this provides dedicated curriculum teaching on energy; and
- Local job opportunities would be created in the construction and operation of the wind farm

In terms of noise, the information pack confirms the following;

- The noise assessment work and subsequent analysis have been undertaken fully compliant with ETSU-R-97;
- The calculated wind farm noise emissions levels do not exceed derived noise limits
- The proposed wind farm can operate successfully within the noise limits appropriately set in accordance with ETSU-R-97.

Also included is a survey of house prices and transactions undertaken in respect of the Burton Wold Wind Farm near to Burton Latimer in Northamptonshire. The survey report concludes by finding:

- In Burton Latimer, house price trends mirror, almost identically, the local and regional benchmarks in the period 2004-2007, which is when it might reasonably be expected the construction of the wind farm in 2005/6 would have had an impact;
- Sales volumes for Burton Latimer 2004-2008 closely tracked the local and regional market trends

Reference is also made to the proximity of turbines to residential properties, and it is stated that in terms of this proposal there is a minimum of 675 metres to any dwelling. The centre of Langford village is given at over 1km from the

nearest turbine and separated by the railway. Seven existing wind farms are listed where the distance of turbines to housing ranges from 450 to 900 metres.

Whilst this information has been assessed by the Council, the impact of the proposal on house prices is not a material planning consideration. The other issues raised are noted, but they do raise new issues or provide a justification for approving the application which is contrary to adopted policy DM1.

13 Overall Conclusions

Tackling climate change is a key Government priority. Accordingly, the planning policy context, at all levels, is supportive of renewable energy schemes. On this basis, the principle of development is acceptable, subject to the proposal meeting other varied criteria. In assessing any aspect of the proposal, the impacts must be weighed against the wider benefits of the scheme in line with relevant planning policy. The energy creation benefits of the scheme are undoubtedly positive in terms of the country meeting its energy targets.

The landscape character impacts of the development are significant, given the scale of the development. Nevertheless, this impact has been weighed against the wider benefits of the proposal and the impact is judged to be acceptable. Policy DM1 of the Core Strategy and Development Management Policies DPD supports renewable energy proposals provided that no harm is caused to any area identified within the Landscape Character Assessment as being of high sensitivity, and this criterion has been met.

The impact of the proposal on the residential amenity of nearby properties is also a key issue in the determination of the application because, as a result of the scale of the proposed wind farm, many properties have the potential to be affected and a large number of objection letters have been received, especially from residents of Langford, the nearest settlement to the application site. It is acknowledged that different properties will be affected to varying degrees and, on balance, the visual amenity and shadow flicker impacts were judged to be acceptable, subject to conditions which could mitigate the negative impacts to an acceptable level. However, it is a requirement of Policy DM1 that renewable energy installations shall not be harmful to residential amenity due to the noise that they produce and the Council's Public Protection team believe the proposal would fail this test. It is for this reason that the application should be refused.

Looking to other issues, the following conclusions have been drawn. The impact on local ecology, hydrology, geology and flood risk are all considered to be acceptable, subject to conditions suggested by the relevant consultees. There is also not considered to be any contamination risks posed by the development.

Cultural heritage and archaeology considerations were also key to the determination of the application. Although there would undoubtedly be an impact on the setting of nearby listed buildings, conservation areas, registered parks and gardens and scheduled ancient monuments, both PPS22 and PPS 5 advocate weighing the harm against the wider benefits of the proposal, taking into consideration the significance of each heritage asset. Detailed consideration has been paid to each heritage asset likely to be affected and the impact does not outweigh the energy creation benefits in the eyes of the relevant consultees. A key issue is the reversibility of the impact, when the wind farm is decommissioned. This is irrelevant to the impact on archaeological remains found on the application site itself, but archaeological investigation at the site has not given rise to any concerns in this respect. This is on the basis that any findings should be recorded.

With regards to telecommunication issues at the site, experience at other wind farm sites indicates that the effects can usually be overcome, at the developer's expense. A number of objection letters from residents made reference to the Sandy Transmitter and the impact the turbines could have on local television reception. Evidence from the BBC's online tool does suggest there would be a detrimental impact to a number of homes but a suitably worded condition could ensure the impact is resolved, at the developer's expense.

In terms of aviation issues, objections were raised by Cranfield University and the Shuttleworth Trust in relation to the impact of the proposal on Cranfield Airport and Old Warden Airfield. Nevertheless, the other relevant consultees, such as the MOD and the Civil Aviation Authority, amongst others, have raised no objection and the objections have been assessed in detail, and the issues raised do not provide a reasonable basis for refusing the application.

The ES makes reference to the socio-economic benefits of the application, and this is considered to be a positive impact of the proposal which should be given significant weight.

With regards to the impact upon users of the local rights of way network, the main impacts are considered to be the visual impact (which has already been established as acceptable) and safety. Much concern has centred on local horseriders. Although the requirements of the British Horse Society have not been entirely met, their requirements are considered to be somewhat stringent, and the turbine layout does accord with the guidance in PPS22. Overall it is considered that, subject to the provision of a permissive path, the proposal would be acceptable in this respect. The other relevant consultees share this view.

Traffic generation and access to the site have each been assessed, taking

into account the concerns raised by nearby residents, and it is considered that the application site and its surroundings have the capacity to accommodate the additional traffic and access requirements. This is subject to conditions to control any impacts to an acceptable level.

For this type of application the construction period and the decommissioning stage must also be considered. Subject to conditions it is considered that any impact on the area and nearby residents would be acceptable. Concern was raised that the wind farm might fall into disrepair, leaving unnecessary visual clutter in the area. Suitably worded conditions could prevent this situation from arising.

An information pack has been provided by the applicant with some additional information about the proposal, much of which are not material planning considerations. On the whole, the information does not raise any new issues, or provide a justification for approving the application.

Whilst there are strong material considerations in favour of the proposal, such as the production of renewable energy which would contribute to regional and national targets, and the economic benefits of the development, these factors are not considered to outweigh the unacceptable noise impact on nearby dwellings and non compliance with policy DM1.

Recommendation

That Planning Permission be refused for the following reason:

The development proposed will lead to excessive noise impact on nearby dwellings, particularly to those properties on East Road, Langford and especially to the houses east of the railway line, and it therefore fails to meet the limits set in ETSU-R-97. There is also insufficient information submitted by the applicant to formulate appropriate noise limits to enable the protection of residential amenity. The proposal is therefore contrary to policy DM1 of the adopted Central Bedfordshire Core Strategy and Development Management Policies, and to PPS22 Renewable Energy and to its Companion Guide, Planning for Renewable Energy.