Item No. 10

SCHEDULE A

APPLICATION NUMBER	**CB/10/03034/FULL**
LOCATION	**Double Arches Quarry, Eastern Way, Heath And Reach, Leighton Buzzard, LU7 9LF**
PROPOSAL	**Erection of a 2.3 MW wind turbine (108m high to top of hub, 149m high to tip of rotor) including access and associated infrastructure.**
PARISH	**Heath & Reach**
WARD	**Plantation**
WARD COUNCILLORS	**Cllrs Peter Rawcliffe & Alan Shadbolt**
CASE OFFICER	**Lisa Newlands**
DATE REGISTERED	**08 September 2010**
EXPIRY DATE	**08 December 2010**
APPLICANT	**Arnold White Estates Ltd**
AGENT	**Hives Planning Limited**
REASON FOR COMMITTEE TO DETERMINE	**Major EIA Development**
RECOMMENDED DECISION	**Full Application - Refused**

Site Location:

The application site lies within the boundaries of Double Arches Quarry, an active sand processing plant that comprises part of a larger operational minerals extraction area. The site lies to the north-east of Leighton Linslade, on Eastern Way, within the Parish of Heath and Reach.

The site is a raised area of land located in the north eastern part of the quarry, adjacent to the settling ponds. Although, it is within the existing boundary of the quarry, it lies outside of the permitted and future working area of the quarry.

The quarry sits within a larger complex of sand quarries, which alongside Nine Acres and Churchways Quarries, is identified as a County Wildlife Site (CWS) and includes a number of waterbodies. These include settlement ponds, which vary in size and location as working patterns dictate, there are also larger lakes which are used by a local angling club.

Approximately 0.2km to the west of the site is Double Arches Pit Site of Specific Scientific Interest (SSSI), which is designated as such for its geological importance. The King's and Baker's Wood and Heaths SSSI is located approximately 0.7km northwest of the proposed location, with part of the SSSI being designated as a National Nature Reserve. This SSSI/NNR is separated from the proposed turbine location by the remainder of the site, Woburn Road, Stone Lane Quarry and Churchways Quarry.

The settlements of Heath and Reach and Leighton Linslade are located to the south-west of the application site. Further beyond to the south-east is the conurbation of Luton, Dunstable and Houghton Regis. There are also a number of smaller settlements in the locality including Overend Green, Potsgrove and Battlesden, and further afield, Woburn, Milton Bryan, Hockliffe, Eggington, Stanbridge, Billington, Soulbury, Stoke Hammond and Great Brickhill.

The Application:

This application seeks planning permission for the erection of a 149 metre high wind turbine, including access and associated infrastructure.

The wind turbine will be similar to the 2.3MW Enercon E-82 model, which has a hub height of up to 108 metres high, a rotor diameter of 82 metres and a maximum height of 149 metres to the blade tip.

The turbine would be mounted on a concrete pad and connected to the existing Double Arches Quarry substation. This connection would be made by way of underground cabling which would be laid along the access road serving the turbine, and the haul road beyond.

Access to the site would be via the A5 junction with Eastern Way and then via the upgraded haul road (site access track) from Eastern Way to the turbine site (which presently serves Churchways Quarry). At the junction of the A5 with Eastern Way, a temporary improvement is proposed. The improvement is of a grass-crete overrun construction consisting of a surface course over a geogrid and membrane. The temporary improvement can occur within public highway and land in the ownership of the applicant.

The site access track would utilise the existing single-track haul road, with the addition of passing places. The access road is predominantly 4.0 metres wide along the existing ditch with widening at the passing places, at the site entrance and on bends in order to accommodate the delivery vehicle swept paths. In the north-west of the site, it would be necessary to provide adequate turning radii for the longest abnormal vehicle. Once the turbine is constructed, the area set aside for swept paths can be reduced and the track narrowed to provide for servicing via smaller vehicles.

It was considered that an Environment Impact Assessment was necessary by the applicant, and in 2008, a scoping opinion was sought from South Bedfordshire District Council in terms of the issues of environmental significance and the scope of the Environmental Impact Assessment (EIA) for the installation of two wind turbines. The suggested scope of the EIA was identified as the following:

- Landscape and Visual Impact;
- Ground conditions, geology and hydrogeology;
- Ecology (Including detailed bat and ornithological surveys);
- Noise;
- Shadow Flicker;
- Traffic and Transportation;
- Aviation;
- Electro-magnetic interference;

- Minerals and Waste;
- Architectural and Cultural Heritage

In February 2010, following work on the Environmental Impact Assessment, the scheme originally proposed in the scoping opinion was amended to reduce the number of turbines proposed to one and constitutes the development proposed in this application.

RELEVANT POLICIES:

National Policies (PPG & PPS)

PPS1: Delivering Sustainable Development (2005)
Supplement to PPS1: Planning and Climate Change (2007)
PPG2: Greenbelts
PPS22: 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)
Draft Overarching National Policy Statement for Energy (EN-1) (2009)
Draft National Policy Statement for Renewable Energy Infrastructure (EN-3) (2009)
PPS5: Planning for the Historic Environment (2010)
PPS7: Sustainable Development in Rural Areas (2004)
PPS9: Biodiversity and Geological Conservation (2005)
PPG24: Noise (1994)

Bedfordshire and Luton Minerals and Waste Local Plan 2000 – 2015 (Adopted January 2005)

M4: Protection of Mineral resources within mineral consultation areas;
G3: Proposals within the Greensand Trust area to support the aims and objectives of the Greensand Trust;
GE26: Restoration of Mineral sites.

South Bedfordshire Local Plan Review Policies

NE3: Control of development in the Areas of Great Landscape Value;
BE7: Conservation and Enhancement of Historic Parks and Gardens;
R15: Retention of Rights of Way Network.

Supplementary Planning Guidance

South Bedfordshire Landscape Character Assessment
Central Bedfordshire and Luton Borough Councils Joint Committee Sustainable Development and Adaptation and Mitigation of Climate
Change Study (Parsons Brinckerhoff, 2010)

Planning History

SB/08/01073/SCO	Request for scoping opinion of the Local Planning Authority – regulation 5 of the Environmental Impact Assessment Regulations for the installation of two wind turbines.
Extensive	

Representations:

Town/Parish Councils

Heath and Reach Parish Council	Heath and Reach Parish Council will not oppose the application for a Wind Turbine at Double Arches Quarry. However we have a concern that if permission is granted for this single wind turbine that this could set a precedent for more to be installed. We therefore ask that the granting of planning permission for this single wind turbine does not in anyway allow for further wind turbines. We expect that a full planning application be required for further installations. We also recognise that the wind turbine would be the first installation in the area and would like to ensure that the effects of the installation are fully monitored. As part of the planning permission we ask that it should be a condition that in the first year of operation an assessment is carried out of the impact of the wind turbine on residents and wild life. This assessment should be available for all to see. The assessment should cover aspects such as visual impact on the area, noise, shadow flicker and electromagnet interference. We note that the planning application states that a scheme of post implementation monitoring of bats will be established by agreement with Natural England and we want that extended to have a wider ecological study into all aspects of wild life in the area of the wind turbine.
Leighton-Linslade Town Council	No objection.
Great Brickhill Parish Council – Aylesbury Vale District Council	No comments received.
Potsgrove Parish Council	No comments received.
Woburn Sands Parish Council – Milton Keynes Council	No comments received.

Neighbours

Letters of Objection

19 Letters of objection were received. The main concerns can be summarised as follows:

- Adverse impact on visual amenity
- Set a precedence for future applications
- Potsgrove is a designated area of natural beauty, this structure would be totally out of character and a blot on the landscape/ ruin one of the finest views in the area
- Noise impact with the introduction of a constant drone
- One turbine would have very little impact on energy generation, surely it would be better to group turbines together in an area of constant wind pressure
- It will dominate the landscape and play no part in the overall plan for the regeneration of the area
- Potential loss of interference of television and radio signals
- Impact of the installation of the surrounding SSSIs and environment
- Wildlife impact
- Concern over the height of the proposal – it is far too high for the location and will be very prominent from the A5 trunk road
- Wind turbines not economically justified or reliable
- Negative impact on the greenbelt
- Close proximity to residential properties
- Health concerns
- Concern regarding shadow flicker
- Sheer size of the turbine would make it very intimidating

Letters of Support

6 Letters of support were received including responses from:

- Aggregate Industries, Garside Sands, Heath and Reach
- Sibelco UK, Heath and Reach
- Leighton Buzzard Narrow Gauge Railway Society Ltd
- South Bedfordshire Friends of the Earth

The main reasons for supporting the application can be summarised as follows:

- Harnessing wind energy makes economic sense, is kind on the environment and opens the door for eco tourism
- Noise is not an issue with wind turbines
- The UK is the windiest country in Europe and yet 80% of our energy still comes from fossil

fuels
- Will help to reduce CO2 in the Leighton Linslade area
- The vision of the Core Strategy (latest version October 2010) for South Bedfordshire and Luton states that the area will be a green growth area
- Not supporting renewable energy would provide an interesting inconsistency between a national and local government of the same political persuasions.
- Onshore wind energy is a critical part of cutting carbon emissions and therefore contributing to global sustainability and it should be viewed by the planning committee in light of this. The proposal could result in around 6 million kWh of renewable electricity being produced in an average year; year in, year out for 25 years.
- In reality there are very few residential neighbours who live within either earshot or within view of Double Arches Quarry or the proposed turbine and therefore the location would seem highly appropriate given the minimal impact it may have on so few people who are already used to living in a highly dynamic landscape of mineral extraction.
- It is not located in a particularly sensitive area, the surroundings already have an industrial use background
- The turbine would enhance the area by providing a fascinating and useful feature
- The turbine would soon pay back its building costs and from then on the costs are minimal
- Noise cannot be cited as a reason for refusal as the noise generated would be less than the adjacent A5
- Wind turbines are more aesthetically pleasing than any electric pylon or telephone mast.

Consultations/Publicity responses

Site notices posted
07/10/10
Application advertised
19/09/10

Internal Consultations

Public Protection Contamination

The applicant has submitted a ground investigation report

which concludes there are no unacceptable contamination risks on the site to human or environmental receptors. I would ask, however, that if during any site investigation, excavation, engineering or construction works evidence of land contamination is identified, the applicant shall notify the Local Planning Authority without delay. Any land contamination identified, shall be remediated to the satisfaction of the Local Planning Authority to ensure that the site is made suitable for its end use.

Applicants are reminded that, should groundwater or surface water course be at risk of contamination during or after development, the Environment Agency at Brampton should be approached for approval of measures to protect water resources separately, unless an Agency condition already forms part of this permission.

Noise

Noise levels at H14 – H19 still appear within very close proximity of the turbine noise limits and hence present insufficient marginality. Further difficulty is presented when trying to ascertain this marginality as insufficient detail is provided in the ES to determine this; the graphs attached to the letter response from SKM on the 12th January 2011 do not clearly show predicted levels or limits. For example, at H18 during amenity hours the margin between the limit and noise level could be between 0-3dB. It is important to clarify these points as ETSU-R-97 is a pass or fail standard and it is these locations that present the greatest concern with regard to the application.

Should the Council be minded to approve the application, there is insufficient information provided to enable setting of limits and conditions. Data requested in terms of the raw data upon which SKM rely and upon which further assertions are made has not been provided. Therefore, if the LPA were minded to approve the only option open at this stage is to set a limit of 35dB(A), which will inevitably be breached at H14-H19. Therefore, our recommendation at this stage is that the application can not be passed until further information is provided by SKM. Further information has now been passed on to the Council's consultants by SKM and they are in the process of analysing the data. The final comments in relation to noise will be provided on the late sheet.

Landscape Officer

I strongly oppose the Application as I consider a turbine will detract from the landscape character and quality of Leighton Buzzard's rural landscape setting. The impact

on the Greensand Ridge is particularly damaging and it will be intrusive in views from several residential areas and viewpoints of the highest value in terms of cultural heritage and recreation. It will introduce an industrial element to a farmed landscape which forms the setting for the Greensand Ridge and detract from the village environments of Heath and Reach, Hockcliffe, Eggington, Potsgrove and Milton Bryan. It would contravene both the former AGLV Policy and the proposed Policy CS9.

Other options are available to secure green energy generation in this locality.

The key landscape issues are:

- the impact of introducing a large , moving, industrial structure into the semi-rural landscape – despite the quarrying ,this is fundamentally an agricultural landscape . Restoration and recolonisation within Double Arches has created a mosaic of habitats which reduce the scale and visual impact of the sand workings , helping to integrate the quarry into its landscape setting. Introduction of a turbine into this landscape will conflict with the agreed restoration of the site and the expectation of the local community.
- impact on the wider landscape setting –which includes the Greensand landscape of Heath and Reach and the Registered Parklands of Woburn Abbey and Battlesden Park, landscapes of national significance for cultural heritage and recreation.
- loss of tranquillity – the visual disturbance introduced by the height of the structure and the movement of the blades.
- further precedent – single turbines create disproportionate visual disturbance. If approved – will more single turbine applications be received rather than for more effective farms? This could introduce issues of intervisibility

Regional Landscape Guidance:

The regional study 'Placing Renewables in the East of England' (2008) aimed to review the potential for green energy across the region and define broad areas of greatest potential. In terms of landscape sensitivity most of the region was evaluated as medium sensitivity, but the Greensand Ridge is evaluated as having medium high sensitivity. Due to the limited extent of this very linear, distinctive landscape, quality of parkland and estate landscape and the public accessibility which enables many wide ranging views over the wooded escarpment itself and also to the surrounding vales.

Local Guidance:

The South Bedfordshire Landscape Character Assessment provides strong guidance to conserve and enhance the Greensand Ridge landscape. Despite the beauty of the area, the character area is considered to be in decline. Planning decisions should seek to protect the area by refusing development which is out of scale or character.

General comments:

- Although the turbine would be sited in a quarry, which is of low sensitivity, the visual impact extends over undeveloped farmland and the attractive greensand woodland and parkland.
- The change in view experienced from residential areas is also of upmost importance. The impact of the loss of an open view will vary with the receptor and with their own relationship with the landscape – but for many the introduction of movement, rather than just the height of the turbine, is the key intrusive factor.

Comments on the submitted Landscape and Visual impact report:

- Throughout the assessment insufficient weight has been given to the impact on views from homes, including how the turbine will be seen by residents and those travelling in the vicinity.
- The extremely direct views from the hamlet of Overend Green Lane have not been given sufficient weight, being only considered moderately significant.
- The community of Heath and Reach, Leighton Buzzard and the travelling public who use the A5, Woburn Road and Eastern Way will have clear views of the turbine, which will be seen as a disruptive element in an otherwise open and pleasant landscape.
- This is an attractive urban fringe countryside and the vista in question forms the foreground to a critical section of the Greensand ridge landscape which is considered of national importance in terms of the heritage sites in the locality (Woburn Park, Battlesden Park, Potsgrove SAM and Kings Wood NNR

Key viewpoints:

- Overend Green Lane – Not only will some residents have clear views of the turbine from their property, the hamlet as a whole will have an outlook dominated by the structure, which will be much more intrusive than the current visual impact of the quarry complex. The movement of the blades will be disturbing – at present residents enjoy peaceful views over farmland of historic value, to the quarry complex and the wider greensand landscape beyond.
- A5/ Sandhouse Lane – The turbine will be an extremely incongruous feature in this farmed landscape, its sheer height will dominate the scene.

Conclusion:

- A single turbine punctuates the skyline causing a strong visual change
- Double Arches Quarry is an extensive feature but it does not have an industrial appearance when viewed from a distance. The reality is that the partially restored quarry is absorbed into the surrounding farmed landscape. It is therefore misleading for the applicants to claim that the industrial nature of the quarry provides an appropriately developed setting
- The turbine needs to relate to the wider setting – the character of the actual site is only a minor consideration
- The moving blades will introduce disturbance to an area associated with cultural heritage, informal recreation and agriculture.

Tree and Landscape Officer South

I refer to our site meeting on the 1st November 2010 to discuss the above application, when it was observed that there is little landscape cover in the immediate position of the turbine, although an isolated clump of Birch is evident in the general vicinity of the site.

The site is open to views across the wider landscape, and is reclaimed from old quarry workings, which has been reinstated with a capped surface layer, which has restricted the natural progression of scrub vegetation.

In recognition that additional landscaping will not mitigate the main structure, and that the existing, scant trees have little significance, I therefore offer no objections regarding the impact on existing landscaping, or the requirement for more planting.

Ecologist	In consultation with Natural England and the County Bat recorder. I agree with their comments and the support the onus they put on the need to ensure adequate follow up survey work of bat mortality is undertaken. I do question the likelihood of being able to shut down the turbine once it is constructed and fully operational, having invested a great deal of money will the applicant not appeal against any requirement for limiting turbine operation to prevent bat collision during high risk time periods or weather conditions. I would also seek to ensure a biodiversity gain through habitat creation/ enhancement as per the Greensand Management Plan.
Sustainable Growth Officer	Generally supportive of the application as it brings the opportunity for a pioneering renewable energy scheme within Central Bedfordshire and will create enough electricity to power approximately 1,319 dwellings, however, this will not be felt locally as it will be a grid fed and not community owned or private wired. I do have some concerns in terms of: • Transportation – impact on wider environment through delivery and construction on site; • Impact on landscape setting – set within the Greensands Landscape and is close to the registered parklands of Woburn Abbey and Battlesden Park. The Greensands landscape is within a medium-high sensitivity according to the Arup document “Placing renewables in the East of England”. The presence of valued features such as the extensive woodland and Woburn estate, cultural heritage and the importance of recreation in the area means the introduction of a wind turbine will have more disruption. • Visual Impact – The turbine will have some visual impact upon these registered parklands, and also upon Potsgrove SAM and Kings Wood, NNR which form an attractive skyline. • Will the turbine be linked to any future housing within the Leighton Linslade Growth Area; • Will this application pave the way for future applications of wind power to be submitted? • Have any other renewable technologies been considered for the site that are visually less intrusive.
Minerals and Waste	Taking into account all the information that has been received, in order to assess any impact that the development will have on the final restoration of Double Arches, a final restoration plan for the site as a whole would be needed. To date the Minerals and Waste team have not received this scheme to be approved under conditions and

	therefore it remains hard to assess if there will be any potential impact. Further comments received 18/01/2011 The current minerals planning permission requires final restoration of the site by 2042. If the life of any turbine permission was to expire before this and the site required to be restored, then there would not be any impact on the long term restoration of the site.
LDF–Joint Technical unit	No comments received
Building Control	No comments received
Conservation and Design Team	The proposed turbine would be out of scale and dominant alien feature in a sensitive wider historical agricultural and wooded landscape which includes the immediate settings of a wide range of heritage assets, and we are generally concerned as to the cumulative impact of the proposed turbine in this respect, along with a particular impact upon the key local 'landmark' asset of All Saints spire. In terms of PPS5 Policies HE9 and HE10, we consider that the turbine, by reason of scale, appearance, operational movement and resulting intrusiveness, is likely to detrimentally impact upon the setting of individual heritage assets, and specific conservation areas within 10km of the site, and to specific heritage assets in Battlesden, Potsgrove and Woburn, where we suspect that this impact to be of most significance.
Archaeology	The proposed development lies within an area containing a number of archaeological sites and features from prehistoric to post-medieval periods, some of which are nationally designated. They represent nationally and regionally important heritage assets. There is a long history of finds of Roman material made in the first half of the 20th century human remains and evidence for a substantial building, possibly a villa. These finds were made from the area immediately adjacent to the location of the proposed wind turbine and given the nature of the finds the Roman remains are likely to extend into the turbine location and as this part of the quarry does not appear to have been subject to mineral extraction any remains will have survived. They represent a heritage asset and the proposed development will have a negative and irreversible impact on the significance of the heritage asset. This does not represent an over-riding constraint on the development provided that the applicant takes appropriate measures to record and advance understanding of the significance of the heritage asset. This will comprise the investigation and recording of any archaeological remains affected by the development.

	There are a number of archaeological sites in the area of the proposed development including the Scheduled Monuments at Potsgrove and Hockliffe (both medieval moated sites and associate features) and an area of medieval settlement and ridge and furrow at Overend Green. The setting of these monuments forms part of the significance of the assets. The proposed turbine will form a very imposing feature in the landscape which will be visible from these monuments and will affect their setting; particularly views out from the monuments. This will have a negative impact on their signifying. However, although it will not be possible to mitigate the impact on the setting of the monuments, particularly those at Potsgrove and Overend Green that impact is not sufficient to represent an over-riding constraint on the proposed development. Therefore, I have no objection to this application on the grounds of its impact on archaeological remains and on the significance of the heritage assets provided that adequate provision is made to record and enhance understanding of the Roman remains at the turbine location. In order to secure this please attach the following condition to any permission granted in respect of this application, this is in line with Policy HE12.3 of PPS 5 *Planning for the Historic Environment*: "No development shall take place until the applicant or developer has secured the implementation of a Written Scheme of Archaeological Investigation which has been submitted to and approved in writing by the Local Planning Authority. The said development shall only be implemented in accordance with the scheme thereby approved." Reason: To record and advance understanding of the significance of the heritage asset in accordance with Policy HE12 of PPS 5
Highways	No objection

Other Local Authorities

Milton Keynes Council	No comments received
Luton Borough Council	No objection

Aviation

Ministry of Defence – Wind Energy	No comments received
National Air Traffic Services	No safeguarding objection to the proposal.
London Luton Airport	The proposal does not conflict with safeguarding criteria. In a response to the applicant a recommendation that a

	continuous red light be mounted at the highest point of the fixed structure for the benefit of light aircraft and local helicopters flying in visual flight rules has been made.
Civil Aviation Authority	I can advise that in isolation the CAA would not make any case for lighting as long as the blade tip of the turbine remains below 150m.

Telecommunication

National Grid	No comments received
Ofcom	No comments received
The Radio Authority	No comments received
BBC Reception Advice	No comments received
EDF Energy Networks Ltd	No comments received
Home Office	No comments received
Wind Farm Site Clearances	No comments received
The Joint Radio Company	The Energy Industry considers that any wind energy development within 1km of a link operating below 3 GHz or 0.5 km of a link operating above 3 GHz, requires detailed coordination. Unfortunately, part (or all) of the proposed development is located within 1km/0.5km of a protected link site or path managed by JRC. A grid reference licensed to Southern Gas Networks may be affected. As a consequence JRC objects to the proposed wind turbine on behalf of Southern Gas Networks.
Vodafone Ltd	No comments received
One2One	No comments received
BT Cellnet	No comments received
Orange	No comments received
Virgin Mobile	No comments received
Cable and Wireless	No comments received
O2 UK	No comments received
T-Mobile	No comments received
Central Networks	The area in question is not covered by Central Networks

Landscape/ Visual

Natural England	No objection subject to mitigation being carried out as described in the Environmental Statement, and that planning conditions are attached to any permission to cover our concerns. The reason for this view is that the mitigation measures proposed are sufficient to ensure that designated sites and protected/notable species will not be adversely impacted by the proposal.
English Heritage	The Environmental Statement has shown that while the direct impact upon the principle heritage assets within the study area are relatively small in themselves, the scale of this turbine within the regional and local landscape will undoubtedly impact upon the character and setting of these assets in the broader context. The overall level of

	impact on the historic environment is therefore greater than that attributed to individual assets. The turbine would be a distinctive landmark, dominating horizons and visible to many moving through the landscape including journeys in and around the specific heritage assets considered. PPS5 – Policy HE10.1 emphasises that where applications that are acknowledged not to make a positive contribution to or to better reveal the significance of an asset or of its setting, "local planning authorities should weight any such harm against the wider benefits of the application".
Wildlife Trust	No comments received
CPRE Bedfordshire	Objection – The site at Double Arches lies within the Southern Bedfordshire Green Belt. Whilst it is true that PPS22 says that the 'very special circumstances' necessary to justify development in the Green Belt 'may include the wider environmental benefits associated with increased production of energy from renewable resources'. The test of whether these circumstances are sufficient to overcome the level of harm caused to the openness of the Green Belt, at the location in question, still has to be applied. CPRE believe that the level of harm inflicted on the landscape surrounding Double Arches far exceeds any case of 'very special circumstances' that could be argued under PPS22. Not only will the installation have an extreme level of dominance over its immediate surroundings, particularly when viewed from the A5, but the intrusive and moving distraction of the turbine blades, protruding above the lie of the landscape, will be visible from points as far away as Woburn Park. The applicants proposed development is one that will have a significant and wholly adverse impact over a widespread area of the Southern Bedfordshire Green Belt. It is a proposal for which the applicant has made out no case of 'very special circumstances' sufficient to outweigh the degree of harm inflicted on the openness of this widespread area of Green Belt countryside. Within its more immediate surroundings, the proposal is dramatically out of scale with, and damaging to, the intimacy and sensitivity of its local landscape setting bordering the Wooded Greensand Ridge, an important landscape character area whose sensitivity to change is judged as high within the South Bedfordshire Landscape Character Assessment.
Chilterns Conservation Board	No comments to make

Other

Highways Agency	No objection – the applicant is to contact the Abnormal Loads Team before any abnormal load is transported on the strategic road network (M1 and A5)
Buckingham and River Ouzel IDB	No comments received
Royal Society for the Protection of Birds	No comments received
The British Horse Society	No comments received
Environment Agency	No objection in terms of flood risk and groundwater subject to appropriate conditions

Determining Issues

The main considerations of the application are;

1. Wind Energy
2. Policy Context
3. Green Belt
4. The Impact of the Development upon Landscape Character
5. Cultural Heritage and Archaeology Considerations
6. Ecology Considerations (including bats and birds)
7. The Effect on Residential Amenity of Nearby Residents (including Noise, Shadow Flicker, and visual amenity)
8. Telecommunication considerations
9. Aviation considerations
10. Traffic generation and access
11. Hydrology, Geology, Flood Risk, Contamination
12. Minerals and Waste
13. Decommissioning

14 Conclusion

Considerations

1. Wind Energy

The principle of harnessing wind energy by wind turbines is well established, and wind turbines are seen to make a significant contribution to electricity supply systems in Europe and in the UK. According to government guidance there is no doubt about the technical feasibility of wind power. Developments in the technology and the electricity market over recent years now mean that wind power is found to be viable across the UK.

The UK is the windiest country in Europe. RenewableUK state that a modern 2.5MW turbine at a reasonable site will generate 6.5 million units of electricity each year, enough to meet the annual needs of over 1,400 households.

Since the first wind farm in the UK was built in 1991, onshore wind energy has established itself as a mature, clean energy generating technology. In 2007 wind energy overtook hydropower to become the largest renewable generation source, contributing 2.2% of the UK's electricity supply, with

onshore wind comprising the bulk of this. Wind has been the world's fastest growing renewable energy source for the last seven years and this trend is expected to continue with falling costs of wind energy, energy security threats and the urgent international need to tackle CO2 emissions to prevent climate change.

The Government's Renewable Energy Strategy states that the ambitious target of generating 15% of all the UK's energy from renewables by 2020 means that 35-45% of electricity will have to come from green sources. The lion's share of these renewables will have to be wind.

The report 'Building a Low Carbon Economy' stresses that onshore and offshore wind together can deliver 30% of the UK's electricity supply by 2020 and be part of a radical decarbonisation of the economy by 2030.

Wind turbines work by converting the kinetic energy of the wind that passes through the swept area of the rotor into electrical energy by means of a rotor, a mechanical drive train and an electrical generator. These are all mounted on a tower. The height of the tower is normally at least twice the length of a blade. The blade needs to be far enough from the ground to minimise turbulence and to maximise the energy capture of the wind turbine.

The amount of actual energy produced from a turbine is often the source of much debate. Wind power is an intermittent source of energy as the wind itself is variable. The rated power of a turbine, which is 2.3MW in the case of the proposed turbine, is the maximum power the turbine will produce and is often referred to as the installed capacity. The rated power is usually available at a certain wind speed known as the 'rated wind speed' in this instance the rated wind speed of the candidate turbine is 12 metres per second. The capacity factor is the ratio of the actual energy produced in one year against the energy which would be produced if the turbine were operating at its rated power.

Annual output can be calculated simply:

Annual output = rated power x capacity factor x no. hours in a year.

Typical capacity factors for onshore wind are between 20-35% with the higher figure being cited by the Sustainable Development Commission in their publication 'Wind Power in the UK (2005)'. Windier sites will yield higher factors. If a capacity factor of 30% is assumed, it is important to note that this does not mean that a wind farm will only generate for 30% of the year. Turbines typically generate useful power for 70-85% of the year but not at full rated power.

If the number of hours is taken 8760 and a capacity factor of 30% assumed. A 2.3MW turbine would yield:

2.3 x 0.3 x 8760 = 6044.4 MW h/yr.

If an average UK household is taken as consuming 4677kWh of electricity per year then a 2.3MW scheme operating at a capacity factor of 0.3 would

provide electricity for 6044.4/4.677 = 1292 homes. However, this would not be felt locally as the turbine proposed would not directly supply a specific housing development as it is grid fed and not community owned or private wired. It would therefore be fed directly into the National Grid and seen as an offset in terms of overall energy production.

The amount of carbon saved CO2 would depend on the fossil fuel being displaced by the wind turbine. This is likely to be gas in the summer and coal in the winter. The DTi estimate that 1MW of electricity from coal is approximately 0.89 tonnes of CO2/MWh and from gas 0.37 tonnes CO2/MWh. If a 2.3MW turbine produces 6044.4MWh/yr then the estimated displacements are as follows:

6044.4 x 0.89 = 5379.16 tonnes CO2 per year for purely coal operation.
6044.4 x 0.37 = 2236.42 tonnes CO2 per year for purely gas operation.

It can therefore be seen that even one turbine can make an important contribution towards reducing CO2 emission.

2. Policy Context

Sustainability and climate change, and the need to increase renewable energy generation and reduce carbon emissions, are key components of current planning policy. It is therefore considered that this should carry considerable weight in determining the application. It is considered that the development will contribute towards the renewable energy and carbon reduction targets for Central Bedfordshire and should be encouraged in accordance with national, regional and local policies.

The policy climate for renewable energy technologies is undoubtedly positive. The Government's energy policy is set out in the Energy White Paper (2007). This document aimed to produce 10% of electricity from renewables by 2010 and 20% by 2020. The White Paper identifies the planning process as a potential barrier to the delivery of renewable energy infrastructure and presses local planning authorities to look favourably on renewable energy projects. This governmental support is evident within PPS22 and its Companion Guide.

PPS1 and its supplement on Planning and Climate change further emphasise the need for the planning system to deliver on the sustainable energy and climate change fronts noting that all planning decisions should have regard to climate change.

PPS22 is the mainstay of Government Policy advice on renewable energy technology. It promotes and encourages the development of renewable energy resources and it notes that small scale projects can provide a limited but valuable contribution to overall outputs of renewable energy and to meeting energy needs both locally and nationally. Planning authorities should not therefore reject planning applications simply because the level of output is small.

It can be seen that national guidance supports the development of wind turbines. The Government directs that the feasibility case for the technology is beyond challenge and that onshore schemes will make a valuable contribution at all scales of development. Moreover, the Government indicates that most areas of the country should be considered acceptable where social, environmental and economic issues can be satisfactorily addressed.

In the absence of adopted Local policy guidance a study was undertaken by Parsons Brinckerhoff on behalf of Central Bedfordshire and Luton Borough Councils on sustainable development and adaption and mitigation of climate change. This study looks at the current energy demand within the area and the scope to reduce CO2 emissions through the use of alternative energy. The study looks at the following aspects; waste management and energy from waste opportunities, wind turbine opportunities, decarbonising existing building stock and reducing CO2 emissions for major new development.

The desktop study in terms of the potential for utility scale wind power development in Central Bedfordshire highlights several potential wind farm sites. If all the highlighted sites were developed a maximum capacity of 54MW could be achieved. In the study it is assumed that turbines with a hub height of 70 metres and a rotor diameter of 80 metres would be used, giving a tip height of 110 metres. These dimensions are typical of a modern 2MW wind turbine that would be likely to be used on developments within the area. Constraints in terms of site location were identified as; noise sensitive areas, ecologically Sensitive areas, roads and railways, aviation, transmission lines, cultural heritage sites, and long distance footpaths.

The study identified the area around the application site as may be suitable for wind power development, however, it was not one of the three with the most potential due to the limited number of turbines that could be sited.

From this study it can be seen that in terms of the local context, the council is generally supportive of renewable energy projects, in particular wind energy and has sought to identify sites that may be suitable for wind energy.

Although PPS22 and local guidance is relatively positive in terms of wind energy, the application site is within the Greenbelt. PPS22 advises that renewable energy projects in the Green Belt are likely to be harmful to openness and therefore considered inappropriate development unless developers can demonstrate very special circumstances that clearly outweigh such harm. Reasons to set aside this presumption against development may include the wider environmental benefits associated with the increased production of renewable energy. This will be explored in greater detail in the following section.

3. Green Belt

The application site is in the Green Belt within which there is a presumption against inappropriate development unless very special circumstances indicate otherwise. Wind turbines are not buildings but are held to be engineering operations and this being the case may fall to be considered inappropriate development under paragraph 3.12 of PPG2 (Green Belts). The same would

apply to the access road.

PPG2 states that engineering operations are inappropriate development unless they maintain openness and do not conflict with the purposes of including land in the Green Belt. In an appeal decision in November 2008 for 4 x 125 metre turbines in Merseyside/ Manchester Green Belt near Aston, Cheshire (the Aston decision) the Inspector considered the issue of openness with some deliberation. He concluded that '*in my view a large wind turbine which would be visible from an extensive area must have an impact on openness*'. He went on to state:

"*Even though the underlying landscape remains visible, the existence and size of the turbine would act as an inevitable interruption to visibility. The space around the structure would become essentially defined by its proximity to the turbine. I believe furthermore that the significance of the effect on openness must be considered to increase in proportion to the number of turbine…"*

Paragraph 3.12 of PPG2 also requires consideration as to whether the development would conflict with the purposes of including land in the Green Belt. These are set out at paragraph 1.5 of the PPG. The Inspector in the Aston decision (and the appeal parties) settled on the view that only two of these purposes were relevant for consideration in the case before him, namely the checking of unrestricted sprawl and assisting the safeguarding of the countryside from encroachment. In terms of these identified purposes, the Inspector concluded that he did not regard wind turbines as sprawl as this implies urban expansion outward. He did however consider them an intrusion into the countryside and as such 'encroachment'. We would agree with this analysis in terms of the proposed turbine at Double Arches Quarry, subject to the addition of one further purpose – to preserve the setting of historic villages, namely Heath and Reach, Hockliffe, and Potsgrove.

It is considered that the proposed scheme would undoubtedly constitute encroachment as an intrusion within the countryside, and that the visible presence of the turbine would impact on the setting of the historic villages and some of the heritage assets within the area (see also Cultural heritage and Archaeology considerations). The important feature of the turbine is that it would be likely to be very dominant in significant views from around the site.

A recent planning appeal for three wind turbines in Bennington, Hertfordshire was dismissed and the Inspector ruled that the benefits of the scheme did not outweigh the harm to the natural and historic environment. In his report the Inspector concluded that the proposal would significantly reduce the openness of the Green Belt by reason not only of their sheer height and span of their blades but also the diameter of their towers. The turbines in this instance were 119m in height. He expanded on this point further by stating that 'they would form a visual 'stop' in views from the immediate surrounding area such that any reasonable observer would feel that the present open character of the landscape had been substantially reduced. This effect would be exacerbated by the tendency of the rotating blades to draw and hold the eye.'

It is acknowledged that there have been conflicting appeal decisions on this subject and that there are appeal decisions that have been upheld. However, a recent Secretary of State decision (Crook Hill case) agreed with the Inspector's conclusions that those proposals within the Green Belt would not maintain openness, would conflict with the purposes of including land in the Green Belt, and would be inappropriate development.

It is therefore considered that the proposed turbine would be inappropriate development in the Green Belt because it would:

- Erode the openness of the Green Belt
- Amount to encroachment into the countryside
- Not preserve the setting of a number of historic towns and heritage assets

This identified harm does not automatically render the proposal unacceptable, rather it weighs in the balance or 'basket' or harm against which a case for very special circumstances must clearly counter. This 'basket' of harm is further weighted in Green Belt terms by other matters referred to in PPG2. Paragraph 3.13 of the PPG states that:

"when any large scale development or re-development occurs in the Green Belt (including mineral extraction, the tipping of waste, and road and other infrastructure) it should, so far as possible contribute to the achievement of the objectives for the use of land in Green Belts (see paragraph 1.6) this approach applies to large-scale development irrespective of whether they are appropriate development, or inappropriate development which is justified by very special circumstances…"

Paragraph 1.6 of the PPG referred to states that once Green Belts have been defined, the use of the land has a positive role to play in fulfilling six objectives. Of these six objectives I would suggest that only one may be appropriately considered here and that is '*to retain attractive landscapes, and enhance landscapes, near to where people live.'* The degree to which the proposal would compromise this objective is discussed further in the next section, however, it is considered that the concern must be registered as 'harm' in Green Belt terms. Similarly, paragraph 3.15 requires that

'*the visual amenities of the Green Belt should not be injured by proposals for development within or conspicuous from the Green Belt which, although they would not prejudice the purposes of including land in Green Belts might be visually detrimental by reason of their siting, materials and design.'*

It can be seen that the proposed development is clearly inappropriate development within the Green Belt and as such a case for very special circumstances must be demonstrated, such that it would outweigh the harm identified.

In paragraph 6.6 of the Planning Statement within the ES, the applicant emphasises that there are currently no other permitted schemes within this part of Central Bedfordshire which are providing any significant amount of energy from a renewable source. The applicant further emphasises the wider

environmental benefits given the amount of energy that would be produced by the turbine and the savings in terms of tonnes of carbon dioxide. Therefore the case for very special circumstances relies heavily on the information given in PPS22, which states that *'when located in the green belt, elements of many renewable energy projects will comprise inappropriate development, which may impact on the openness of the green belt. Careful consideration will therefore need to be given to the visual impact of projects, and developers will need to demonstrate very special circumstances that clearly outweigh any harm by reason of inappropriateness and any other harm if projects are to proceed. Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources'.* The applicant also asserts that whilst very special circumstances do exist in the form of wider environmental benefits, the proposed turbine would not have a significant effect on the openness of the green belt and that it should also be noted that all the land outside the urban areas in Central Bedfordshire south is designated as green belt and it is thus inevitable that turbines in the locality will be within the green belt.

It is agreed that the proposed turbine will generate a significant amount of renewable energy, and displace a similarly significant amount of CO2 – this is set out in section one, and provides a useful reference. However, in assessing the scheme against Green Belt policy the task is in determining the weight that should be attributed to this benefit against the harm identified to the Green Belt. In the lack of sufficient guidance in this aspect within National Policy it is considered that this must be determined by reasoned planning judgement.

The reference to the wider environmental benefits within PPS22 as a very special circumstance adds significant weight to the benefits argument. However, this is then necessarily attenuated by the lack of local targets and the study by Central Bedfordshire Council and Luton Borough Council on sustainable development and adaption and mitigation of climate change. Within this study a number of sites suitable for wind farms have been identified within the Central Bedfordshire South area. This site was not included although was identified as having potential, however, there were a number of alternative sites that would allow for a greater number of turbines and therefore had greater potential. Whilst these alternative sites may also be within the Green Belt area, it is considered that the wider environmental benefits of the sites proposed may be significantly greater than the site proposed and therefore greater weight could be given to the very special circumstance than in this instance in terms of outweighing the harm to the green belt. Also, the sites identified have been based on substantially shorter turbines – only 110m compared to the 149m turbine proposed in this instance.

In addition to this the Bennington appeal decision emphasises that the most recent statement of policy, the UK Renewable Energy Strategy, gives equal emphasis to reducing carbon emissions and securing energy supply, and safeguarding the landscape and natural heritage. Furthermore, 'Green Belt policy has for over half a century been, in the words of PPG2, an essential element of planning policy; and para. 1.4 of that guidance records its fundamental aim as to keep land permanently open.

In my opinion, it is therefore considered that the proposal represents inappropriate development within the Green Belt because it would:

- Erode the openness of the Green Belt
- Amount to encroachment into the countryside
- Not preserve the setting of a number of historic towns and heritage assets

Further more, the development would be likely to harm the visual amenity of the Green Belt and compromise a Green Belt objective, in terms of the retention and enhancement of a landscape near to where people live.

The identified harm to the Green Belt must therefore be clearly outweighed by very special circumstances. PPS22 makes it clear that such circumstances may include the wider environmental benefits, however, in this instance it is not considered that the wider environmental benefits alone would outweigh the identified harm to the Green Belt.

4. The impact of the development upon landscape character

A combined Landscape, Visual Impact and Cultural Heritage Assessment (LVIA) has been undertaken by the applicant. This assessment covers impacts on landscape character, the historic landscape, visual impacts and impacts on the setting of heritage assets. This section will discuss the impact of the development on landscape character, with subsequent sections discussing visual impact and the impact on the setting of heritage assets.

The site is not covered by any landscape designations. There are however, a number of designated areas that fall within the identified zone of visual influence of the site. To the east is the Battlesden Grade II Registered Park, and to the north-east lies the Grade I Registered Park at Woburn.

In terms of Regional Guidance, the regional study “Placing Renewables in the East of England” (2008) is a material consideration and aimed to review the potential for green energy across the region and define broad areas of greatest potential. The information presented in the report forms part of the evidence base for the revision to the RSS policies on renewable energy. Whilst the information presented in the document is appropriate for a strategic regional study, it is not a sufficient basis for decisions about individual renewable energy proposals in the region and should not be used for such a purpose. Each application for renewable energy development in the region must be considered on its merits, including site-specific issues that are not appropriate for discussion in a regional study. However, it can provide a useful background to the landscape sensitivity of an area and broad areas where it is considered that renewable energy development may be considered favourably.

In terms of landscape sensitivity within the above study, the regional approach was developed utilizing the National Character Map. Most of the Bedfordshire region was evaluated at medium sensitivity, however, the Greensand Ridge was evaluated as having “medium – high “ sensitivity. The

greater sensitivity of the area is on account of the limited extent of this very linear, distinctive landscape, the quality of the parkland and estate landscape and the public accessibility which enables many wide ranging views over the wooded escarpment itself and also to surrounding vales. The application site is seen to be close to the identified Greensand Ridge area, however, it is not within the area in question. The above document continues to look at the potential for commercial wind development within landscape areas within the region. Table D1.1 identifies the relationship between the landscape sensitivity of zones and the largest wind farm typology potentially acceptable. It is acknowledged in formalising this table that there will be some variation in local landscape sensitivity and hence variation to the maximum wind farm typology. This table identifies JCA (joint character areas) 90 – Bedfordshire Greensand Ridge. It is considered that the medium to small scale of the landscape and distinctive narrow escarpment which characterise this area increase the areas sensitivity to wind development. It is considered that there may be the potential for a small wind farm typology (2-3 turbines). However, the text also states that in summary it can be seen that the favoured JCAs are 85, 46 and 88 – Breckland and Thetford Forest, the Fens and Bedfordshire and Cambridgeshire Claylands. The least favoured are 79, 80, 90 and 92 – the Broads and environs, Bedfordshire Greensand Ridge and Rockingham Forest.

The South Bedfordshire Landscape Character Assessment (SBLCA) identifies the site as lying close to the Woburn Greensand Ridge (6A), a character area of the Wooded Greensand Ridge (Type 6), and within the character area (Type 8) which is referred to as Settled and Farmed Clay Hills (Type 8), specifically Toddington – Hockliffe Clay Hills (8A). The South Bedfordshire Landscape Character Assessment provides strong guidance to conserve and enhance the Greensand Ridge landscape. It is acknowledged that the site is not within the Greensand Ridge area, however, given the scale, height and operational movement of the proposed turbine, it is considered that it would have a detrimental impact on this landscape area. Despite the beauty of the area, the character area is considered to be ‘in decline’. It is considered that planning decisions should therefore seek to protect the area by refusing development which is out of scale or character, and that management is required to improve the integrity of the landscape.

Area 6A – The Woburn Greensand Ridge

This area is characterised by extensive woodland and the influence of the Woburn estate. Church towers form landmarks, but the large town of Leighton Buzzard is well screened by woodland. Hence there is little urban influence in this character area. The Landscape Character sensitivity is judged to be high due to the presence of valued features, the cultural heritage and the importance of the area for recreation. These factors combine to form a strong sense of place. In terms of visual sensitivity, this is considered to be moderate to high, mainly because the woodland can help to integrate new features. However, sensitivity is greater with regard to the wooded ridgeline which forms a backcloth to the vale – hence any change which impacts on the ridgeline has the potential to be highly visible from a wide area. The development considerations in relation to this character type emphasise the need to conserve the wooded skyline and to conserve the contrast between

the ridge and the vale. It is considered that given the height of the proposed turbine and its elevated position that it would conflict with this requirement.

Area 8A – Toddington – Hockliffe Clay Hills

The site is also close to and would affect features within this character type. This area is characterised by an agricultural landscape with a series of connected hills separating the low-lying Eaton Bray Clay vale from the prominent Woburn Wooded Greensand Ridge. With the exception of Toddington, villages are found on areas of lower ground – in the subtle valleys formed by the Clipstone Brook. The key sensitivities in this area are the historic settlements, including the churches, the Clipstone Brook, but also areas of higher ground such as Eggington and Potsgrove. The strategy in this area is to enhance the landscape, with development considerations including concerns regarding the development of tall structures (such as communication masts) in the landscape. Also, an appropriate rural interface is required between the settlement edges and the rural landscape. The importance of conserving the clear views and visual relationship with the adjacent vales and Wooded Greensand Ridge is emphasised.

The ES states that the site lies near the top of the Clipstone Brook drainage basin that opens out and down to the south. The valley also continues up to the north but with a more enclosed view. The floor of the basin lies at 108m AOD, the proposed turbine location lies at 123 AOD and the ridges either side and to the north rise to between 130 and 160 AOD. The applicant therefore emphasises that while the site sits within the broad line of the dip slope of Greensand Ridge, it is settled into a relatively low, enclosed part of the ridge.

The Landscape Officer for Central Bedfordshire Council has commented on the application and emphasises that in the right location a turbine can add to the scene. It is however, considered that the proposed site is not appropriate as it will introduce a major, moving, industrial structure into a landscape where the priority is the restoration of the quarry and the stewardship of the farmland to maintain the rural quality of the landscape. It is considered that this is an attractive urban fringe countryside and the vista in question forms the foreground to a critical section of the Greensand Ridge landscape which is considered of national importance in terms of the heritage sites in the locality, for example, Woburn Park, Battlesden Park, Potsgrove SAM and Kings Wood Site of Special Scientific Interest, the latter of which forms an attractive skyline to the north.

Whilst, it is acknowledged that guidance in PPS22 makes it clear that local landscape and local nature conservation designations should not be used in themselves to refuse planning permission for renewable energy developments, it is considered that the importance of these designations need to be taken into account when determining the landscape and visual impact of the proposed development and in particular as stated in paragraph 13 of PPS22, in relation to development within Green Belts, careful consideration will therefore need to be given to the visual impacts of projects...'.

It is considered that the proposed turbine would punctuate the skyline and cause a strong visual change. The Landscape Character Assessment advises

protection of the wooded skylines of the Greensand Ridge. Whilst it is acknowledged that Double Arches Quarry is an extensive feature and is set amongst a complex of quarries, it does not have an industrial appearance when viewed from a distance. The quarry has been partially restored and created a number of attractive features which have been absorbed into the surrounding farmed landscape. It is considered that the proposed turbine needs to relate to the wider setting and that the character of the actual site is only a minor consideration. Therefore, although the turbine is proposed to be located within the quarry complex, the emphasis on the industrial nature of this site by the applicant is not highly significant, as it is the views of the turbine from the wider setting that would be of greater importance.

In counterpoint to the above, the economic and social benefits of such technology, climate change and the changing nature of farming must be considered and afforded significant weight. The countryside is predominantly a working landscape which has for many decades been changed and altered by changes in farming practices. In this regard the Government makes it clear that renewable energy production, is to be encouraged and that most landscapes outside of those with special protection should be capable of accommodating such development. Wind turbines produce no pollutants (excluding the excepted impacts of noise and shadow flicker) and allow farming and the restoration of the quarry to continue underneath. They are arguably temporary (as noted in paragraph 20 of PPS22), in as much that once removed they leave no lasting legacy, and of course they displace carbon based energy sources and produce carbon free electricity.

National policy guidance does not make clear the scale of development appropriate in any given landscape. Therefore, it is considered that the determination of this scheme centres on the scale of the development proposed and as to whether it is appropriate in the landscape. Given the comments of the Council's Landscape Officer, there are serious reservations in this regard, particularly when considering their impact at the local level.

It is considered that given the scale of the proposed development and the elevated position (123AOD) that it would 'tower' above much of the surrounding landscape. Also, given the siting of the proposal within the Greenbelt, PPS22 makes it clear that careful consideration will need to be given to the visual impacts of the proposal. Moreover, the movement and distinctive appearance of the proposed turbine would have significant adverse visual effects and impact on the landscape. It is therefore considered that the proposal would have a detrimental impact on the character of the landscape.

5. Cultural heritage and Archaeology considerations

There are no designated heritage assets within the site. Due to the height and nature of the proposal, it has the potential to affect the settings of nearby designated assets. The principal assets include the following:

- Potsgrove Scheduled Ancient Monument
- Battlesden Registered Park (Grade II) and Listed Buildings
- Milton Bryan Scheduled Ancient Monument
- St Peter and All Saint's Church, Battlesden (Grade I)
- Woburn Abbey Registered Park (Grade I) and Listed Buildings

- Milton Bryan Conservation Area
- Heath and Reach Conservation Area
- Eggington Conservation Area
- Leighton-Linslade Conservation Area
- Woburn Conservation Area

Scheduled Ancient Monuments

There are a number of archaeological sites within the area of the proposed development including seven scheduled ancient monuments within 5 kilometres of the site and an area of medieval settlement and ridge and furrow at Overend Green. The setting of these monuments forms part of the significance of the assets. It is considered that the proposed turbine will form a very imposing feature in the landscape which will be visible from these monuments and will affect their setting; particularly views out from the monuments. However, it is considered that although there will be a negative impact and it will not be possible to mitigate the impact on the setting, particularly at Potsgrove and Overend Green, it is not sufficient to represent an over-riding constraint on the proposed development.

Heritage Assets – Registered Parks, Listed Buildings & Conservation Areas

Given the scale of the proposed turbine, the impact of the proposal in respect of both the natural and historic landscape is therefore likely to be significant, over a considerable distance. The submitted Environmental Statement points out that the magnitude of impact reduces with distance (para. 4.4.5), and this is not an un-reasonable assertion, although a chief concern in respect of the historic environment is the apparent cumulative impact upon the comprehensive range of historic buildings and sites. The Council's Conservation Officer has commented on the application and has noted that particular issues of concern have become apparent in respect of the following types of heritage asset:

- Historic landscape assets – Battlesden and Woburn
- Designated assets whose character is significantly derived from landscape setting – Sewell and Eggington Conservation Areas
- Assets which are significant local landmarks and key to a sense of place – the spire of All Saints Church, Leighton Buzzard.

Battlesden Park – In respect of this park, and in the context of its current consideration as a designated heritage asset, we cannot agree with the key assumption of the submitted Environmental Statement that "…as a 19th Century park that has lost its principal house and is in relatively poor condition, the rarity value of the park must be considered low" (paragraph 4.3.31). Views of the turbine from the church and other listed buildings are partly obscured, though the wider setting of the church along the approach road to the south-east has more open views, less than 2km to the proposed turbine.

Woburn Park – The Park is a highly sensitive heritage asset of outstanding interest and national importance, and is a landscape setting of great

significance. Again, we cannot agree with the key assumption in the Environmental Statement that "…because of the size of the estate, the role of setting for any given point is relatively limited" (4.3.41). It has been difficult to assess the impact of the proposal without the benefit of a marker balloon, however, it is considered that there would be views of the turbine from Stump Cross a high point within the site and from this point there may be some flicker discernable during the winter period.

In terms of the conservation areas at Eggington, the ancient chalk-scarp hamlet of Sewell, and Tebworth, these are designated heritage assets whose special character is significantly derived from their landscape setting and that views of the turbine from these areas may undermine this character. In the case of both Sewell and Eggington, it is considered that the impact of the turbine may be considerable and potentially harmful. The significance of the landscape to the special character of these designated settlements, along with the specific level of impact and potential harm of the proposal has not been adequately/ clearly assessed within the submitted Environmental Statement.

The designation of Hockliffe Church End as a conservation area is not recognised in the Environmental Statement, and the specific assessment of sensitivity and likely impact of the proposal need to be considered accordingly.

The landmark impact of the proposed turbine is acknowledged as a 'function' in the submitted Environmental Statement (4.4.13). In this respect there is particular concern about the impact of the proposal upon the landmark significance of the spire of All Saints Church, Leighton Buzzard. The wider landscape importance of this historic landmark is significant. It very much defines the SW (Wing Road) approach to the town of Leighton-Linslade, and is a recognisable and attractive landscape feature as far away as Potsgrove. It is considered that the impact of the proposed turbine upon the key landmark significance of All Saints spire may be considerable and potentially harmful, and should be given individual significance and due weight in any further development of the proposals.

English Heritage have commented on the application and they consider that whilst the direct impact on the principle heritage assets within the study area is relatively small, it is the scale of the turbine within the regional and local landscape which will undoubtedly impact on the character and setting of these assets in the broader context. English Heritage therefore emphasise that it is the overall level of impact on the historic environment that is greater than that attributed to individual assets. Whilst English Heritage have not objected to the application, they have emphasised Policy HE10.1 of PPS5 which considers that where applications that are acknowledged not to make a positive contribution to or to better reveal the significance of an asset or of its setting *'local planning authorities should weight any such harm against the wider benefits of the application'.*

The Council's Conservation Officer has commented on the application and states that on the basis of the photomontage material submitted as part of the Environmental Statement, it has been very difficult to clearly evaluate the

likely impact and potential harm to individual designated heritage assets over a wide area. It is considered that the proposed turbine would be out of scale and a dominant alien feature in a sensitive wider historic agricultural and wooded landscape which includes the immediate settings of a wide range of heritage assets, and there is general concerns as to the cumulative impact of the proposed turbine in this respect, along with the particular impact upon the key local 'landmark' asset of All Saints spire.

The proposal is therefore considered contrary to policies HE9 and HE10 of PPS5; by reason of scale, appearance, operational movement and resulting intrusiveness, it is likely to detrimentally impact upon the setting of individual heritage assets, and this impact will be cumulative across a considerable area of historic and natural landscape of significant value and sensitivity.

6. Ecological considerations (incl birds and bats)

A full ecological assessment for the site has been carried out, with surveys carried out throughout 2009. The scope for the assessment was agreed in consultation with Central Bedfordshire Council, Natural England and Bedfordshire Bat Group.

The nearest SSSI designated for its biological importance is King's and Baker's Wood and Heaths SSSI, which is approximately 0.7km northwest of the proposed turbine location. This SSSI is separated from the proposed turbine location by the remainder of the site and Woburn Road. The other nearest SSSI is Double Arches Pit, however, there will be little impact on this SSSI as it is nationally notable for geological rather than biological reasons.

Several County Wildlife Sites (CWS) are in immediate proximity, including the majority of the application area itself being important for wildlife. It is considered that without mitigation measures the proposed turbine would have an impact on these sites. However, Natural England are satisfied with the mitigation measures proposed in the form of a Construction Environment Management Plan (CEMP) and the carrying out of habitat enhancement as described in the site management plan.

During general observation and specific surveys the evidence of the presence of a number of protected species was recorded within the site. The ES states that the hedgerow in the north-east of the site, edges of the coniferous woodland, lakes and scrub borders were noted to be important navigational features and foraging resources for several species of bats, including Barbastelle bats. Surveys for reptiles did not record their presence, and the lakes are considered unsuitable for breeding populations of Great Crested Newts. A number of other common mammals including Chinese water deer, rabbits and foxes were also recorded during the survey period.

Impact to habitats

The application site holds a mix of developing and mature habitats and thus provides a range of potential niches for wildlife. The main areas of importance are identified as semi-improved grassland, mature trees, hedgerows, scrub and waterbodies. It is considered that whilst the proposed development

footprint is relatively small, it will result in the permanent loss of habitats and disturbance during construction. However, Natural England are satisfied with the approach that has been taken in terms of the Greensand Trust Management Plan. It is not considered that the magnitude of losses in the long term is not significant to result in an overall impact to the wildlife value of the site.

Impact on Birds

It is noted that a range of bird species were recorded at the site through both breeding bird surveys and vantage point work. Natural England have assessed the information submitted along with the Council Ecologist and the use of the collision risk model. For the information gained it does not appear that the application site and surrounds are of importance either for rare/notable species, or for birds that are particularly sensitive to turbines. It is therefore considered that the proposed turbine would not adversely affect any bird species of conservation concern.

Impact on Bats

A comprehensive program of bat monitoring was set up at the site. A range of bat species were recorded including the rare Barbestelle, and a notable number of records for Pipistrelle and Noctule. Natural England agree cautiously with the findings submitted in the ES. Based on the pattern of use displayed through the survey work we agree that the turbine is located in a part of the site away from the highest bat activity. Further to this Natural England also agree that the clearance from ground to blade tip of at least 67m will lessen the risk of bats moving around the site coming into contact with blades during foraging or commuting.

It is recognised by Natural England and the Council's Ecologist that based on the current evidence there remains some risk that species of bats that regularly fly high, such as Noctule, may face risk of collision when flying at heights over 67m. It is therefore considered that the adoption of rigorous post construction monitoring is therefore essential to ensure that the low level of impacts in the ES are validated and that remedial measures can be put in place should impacts be seen. Natural England and the Council's Ecologist are satisfied that provided a suitable post construction monitoring program can be agreed and mitigation measures undertaken if found necessary then they do not object to the application in terms of the impact on bats.

Natural England and the Council's Ecologist do not object to the application, however, they have raised concerns regarding the impact on bats. It is considered by Natural England that this can be dealt with by condition in terms of a Post construction monitoring plan.

From the information given in the ES and the response from Natural England, it is not considered that the proposal would have a detrimental impact on the ecology of the area to warrant refusal. Due to the species of birds found at the site it is not considered that the proposal would adversely affect any bird species of conservation concern. In terms of the impact of the proposal on bats, as mentioned previously, Natural England have raised concerns over

the impact of the proposal on bats, but have cautiously agreed with the findings of the ES. It is therefore considered that the concerns raised could be adequately dealt with by planning condition. It is therefore not considered that the proposal would adversely affect any bat species of conservation concern based on the findings of the ES.

7. The effect on the residential amenity of nearby residents (incl noise, shadow flicker, visual amenity)

The main properties which might be affected by the proposal are Overend Green Farm, Checkley Wood Farm, Churchways Farm, Sandhouse Cottages and Sandhouse Farm.

The main issues in terms of residential amenity are those of: noise; shadow flicker and visual impact.

Noise:

PPS22 notes that renewable energy technologies may generate small increases in noise levels, such as aerodynamic noise from wind turbines. The local planning authority should ensure that renewable energy developments have been located and designed in such a way to minimise increases in ambient noise levels and the 1997 report by ETSU for the Development of Trade and Industry should be used to assess and rate noise from wind energy development.

The noise assessment undertaken demonstrates the likelihood that the resultant noise levels from the turbine operating at normal speed can be operated in compliance with target criteria defined in ETSU-R-97. Separate target criteria have been developed for both night-time and daytime periods in order to protect both the sleep of local residents and to protect the outdoor amenity of the area.

The nearest residential property is approximately 650m from the turbine. The consultants on behalf of the Council's Public Protection department have raised concern about some of the data provided within the Environmental Statement, some of this has been corrected, however, there is still some uncertainty regarding some of the information provided. It is considered that the noise levels at Overend Green (H14 – H19) still appear within very close proximity of the turbine noise limits and therefore present insufficient marginality. Further difficulty is presented when trying to ascertain this marginality as insufficient detail is provided in the Environmental Statement to determine this, the graphs attached to the additional information provided by the applicants consultant do not clearly show the predicted levels or limits. For example, at Overend Green Farm (H18) during amenity hours the margin between the limit and noise level could be between 0-3dB. It is important to gain clarification on these points as ETSU-R-97 is a pass or fail standard and it is these locations that present the greatest concern with regard to determining the application.

Should the Council be minded to approve the application then it would be

conditional on certain noise levels. At present, it is considered that there is insufficient information provided to enable the setting of these limits and conditions. The applicant has subsequently provided further information to the Council's consultants. This information is in the process of being assessed and the final comments on this issue will be reported to committee through the late sheet.

Shadow Flicker

PPS22 states 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 neighbouring 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. A single window is likely to be affected for a few minutes at certain times of the day during short periods of the year.

Guidance on shadow flicker is included in Planning for Renewable Energy, A companion guide to PPS22, which states that ‘flicker effects have been proven to occur only within 10 rotor diameters of a turbine’. Therefore, in this instance the rotor diameter is 82 metres, all residential properties within 820 metres of the proposed turbine have been considered.

Furthermore, the path of the sun in the UK is such that only properties within 130 degrees either side of north, relative to the turbines can be affected at the latitudes within the UK.

From the analysis only four properties in the vicinity of Overend Green Farm could theoretically be impacted. In terms of the impact on these properties the magnitude of the effect would be weak, of low frequency and occur before 5.40am in summer when windows in occupied rooms are likely to be screened by curtains. At the worst affected window, taking a conservative view of the hours per year that the effect would occur, the effect would only happen for a total of 11 hours per year. It is therefore not considered that the impact of shadow flicker would have an adverse impact on the residential amenities of the nearby properties to warrant refusal.

Visual Impact

PPS22 acknowledges that of all the renewable technologies, wind turbines are likely to have the greatest visual and landscape effects.

The impact of the loss of an open view will vary with the Receptor and their experience of the landscape – but for many people the introduction of movement, rather than just the height of the turbine may be highly intrusive.

The proposed turbine would measure up to 108m to the hub, with a maximum ground to tip height of 149m. It would be visible from a wide range of views, especially from the properties in Overend Green, Sandhouse and Checkley Wood Farm. From many of the close views from residential properties, the turbine will be seen in conjunction with the industrial nature of the quarry. It is acknowledged that the proposed turbine would be visible from the residential

properties referred to above.

In terms of the closest residential property, Overend Green Farm, it is considered that their views will be dominated by the proposed turbine and that it would appear overbearing in the outlook from the property and would therefore make it a less attractive place to live. It is therefore considered that the proposal would have a serious adverse effect on the living conditions of this property.

8. Telecommunication considerations

It is acknowledged that wind turbines can potentially affect electromagnetic transmissions blocking or deflecting line of sight radio or microwave links or by the 'scattering' of transmission signal.

Paragraph 25 of PPS22 notes that it the responsibility of developers to address any potential impacts in relation to radar and aviation, and the legislative requirements on separation distances, before planning applications are submitted. The ES and the Planning Statement submitted with the application demonstrate that this work has been undertaken prior to submission and where necessary concerns taken on board. There have been no objections from Aviation Authorities.

The Joint Radio Company Limited analyse proposals for wind turbine sites on behalf of the UK Energy Industry. It assesses their potential to cause interference to radio systems operated by Energy Industry Companies in support of their operational requirements for safety management of critical national infrastructure.

The Energy Industry considers that any wind energy development within 1km of a link operating below 3GHz or 0.5km of a link operating above 3GHz requires detailed coordination. Unfortunately, part (or all) of the proposed development is located within 1km/0.5km of a protected link site of path managed by The Joint Radio Company. As a consequence JRC objects to this proposal on behalf of Southern Gas Networks and itself. It is considered that this objection could be overcome by condition if necessary and would not be sufficient to warrant refusal of planning permission.

9. Aviation considerations

As noted above wind turbines can potentially affect electromagnetic transmissions blocking or deflecting line of sight radio or microwave links or by 'scattering' of transmission signals and can affect systems concerned with aviation and radar. These effects can cause turbines to appear as returns on radar systems representing 'clutter' for air traffic control services and degrading the signal when tracking aircraft through as area of a wind farm.

Consultations have confirmed that there is no safeguarding objection from current aviation authorities including the Civil Aviation Authority, London Luton Airport, and National Air Traffic Services.

London Luton Airport have requested that in the interest of air safety a continuous red light be mounted at the highest point of the fixed structure mainly for the benefit of light aircraft and local helicopters flying in visual flight rules. Given the local request for the light it is considered that this would have to be provided and that this could be dealt with by condition.

10. Traffic generation and access

The ES states that the operation of the proposed turbine would not result in significant transport impacts, with only occasional maintenance vehicles visiting the site. Substantial work has been carried out in terms of transporting the turbine blades and components to the site and this is considered acceptable in highway terms and the Development Management Highways Officer has raised no objection to the application.

The proposal is therefore considered acceptable in terms of highway safety considerations.

11. Hydrogeology/ Geology/ Flood Risk/ Contamination

The access road to the turbine is partly within Flood Zone 1, 2 and 3. The ground level is to be altered within Flood Zone 1 and the Environment Agency are satisfied with the information provided and do not raise any objection to the application.

There is some concern from the Environment Agency regarding contamination. However, given the information provided within the ES, they have raised no objection on this basis providing a number of conditions are imposed on any grant of planning permission.

It is therefore not considered that the proposal results in any detrimental risk in terms of flooding and contamination to warrant refusal.

12. Minerals and Waste

The scoping opinion issued by the Council requested that the ES dealt with the issue of Minerals and Waste.

Double Arches Quarry is a sand processing plant which has previously been worked out and restored. The application site sits on an area of land within the main quarry boundary, whilst the proposed access road currently serves as a haul road for the adjoining Churchways Quarry.

The proposed development would be physically separate from the adjacent mineral operations and restoration planning permissions therefore the applicant states that there would be no risk of impact from the proposed wind turbine on the existing quarry operations/ restoration plan. The Council's Minerals and Waste Officer has commented on the application and states that it is difficult to assess the proposed development as a final restoration plan for the quarry site has not been received. However, they have stated

that the current minerals planning permission requires final restoration of the site by 2042. Therefore, should the life of the turbine expire before this and the site be required to be restored, then there would not be any long term impact on the restoration of the site.

It is therefore considered that the proposal would not have a detrimental impact on the restoration of the quarry and that the lifespan of the turbine would be 25 years, therefore, once decommissioning has occurred, the site could be restored in line with any future restoration plan submitted.

13. Decommissioning

An important feature to note in terms of wind energy developments is their general reversibility (in terms of landscape).

The wind turbine will be designed with an operational life of 25 years. Following this the wind turbine would be dismantled and removed, with the site being reinstated.

PPS22 highlights the visual impact of turbines and it notes that these impacts may be temporary if conditions are attached to planning permissions which require future decommissioning of turbines.

The applicant has indicated that such a condition would be acceptable in this instance.

14. Conclusion

Given the foregoing appraisal it is considered that the proposal would be seen as inappropriate development within the Green belt as it would erode the openness of the Green Belt, amount to encroachment into the countryside and would not preserve the setting of a number of historic villages and heritage assets. It is not considered that a case for very special circumstances has been sufficiently demonstrated to the extent that it would outweigh the identified harm to the Greenbelt, as such the proposal is contrary to PPG2.

An important consideration is the height and scale of this particular turbine. The applicant has been unable to locate a similar sized onshore turbine in the UK (we are aware of offshore proposals for turbines of similar height).

In addition to this it is considered that given the scale, height, prominence, and motion of the turbine within the landscape that it would appear visually intrusive and detract from the landscape character and quality of Leighton Buzzard's rural landscape setting. It would also have a detrimental impact on the Greensand Ridge and will be intrusive in the views from several viewpoints of the highest value in terms of cultural heritage and recreation. It is considered that it would introduce an industrial element to the a farmed landscape which forms the setting for the Greensand Ridge and detract from the village environments of Heath and Reach, Hockliffe, Eggington, Potsgrove and Milton Bryan.

In terms of the impact of the proposal on the heritage assets identified within the report, it is considered that by reason of scale, appearance, operational movement and resulting intrusiveness, the turbine would have a detrimental impact upon the setting of individual heritage assets, and this would be cumulative across a considerable area of historic and natural landscape of significant value and sensitivity. The development would therefore be contrary to the key presumption for the conservation of designated heritage assets, and the preservation and enhancement of their settings, as set out in Policies HE9 and HE10 of PPS5. Also, in the submitted Environmental Statement, insufficient weight has been given to the importance and sensitivity of the following heritage assets:

- Battlesden and Woburn Registered Parks and Gardens of special historic interest, with associated listed buildings;
- The Conservation areas of Sewell, Eggington, Tebworth and Hockliffe Church End;
- The important local 'landmark' feature of the spire of All Saints Church, Leighton Buzzard;
- The parish church of St. Mary the Virgin at Potsgrove.

It is therefore considered that the proposed development would be contrary to national planning policy PPG2 and that the benefits of the proposal, do not outweigh the harm to the natural and historic environment, and that the very special circumstances necessary to justify the development do not therefore exist. The proposal is therefore contrary to national planning policy PPG2 and PPS5, and policies NE3 and BE7 of the South Bedfordshire Local Plan Review 2004.

Recommendation

That Planning Permission be refused.

1 The proposed development is considered to be inappropriate development within the Green Belt. By virtue of the scale, height, prominence and motion of the turbine, it is considered that it would erode the openness of the Green Belt, amount to encroachment into the countryside and would not preserve the setting of a number of historic villages and heritage assets. It is not considered that a case for very special circumstances has been sufficiently demonstrated to the extent that it would outweigh the identified harm to the Green Belt; as such the proposal is contrary to PPG2.

2 By virtue of the scale, height, prominence and motion of the proposed turbine it is considered that it would be visually intrusive and would detract from the landscape character of the area, and the visual amenities which nearby occupiers could reasonably expect to enjoy. The proposal is therefore contrary to Policy BE8 of the South Bedfordshire Local Plan Review (2004)

3 The proposed development by reason of scale, appearance, operational movement and resulting intrusiveness, the turbine would have a detrimental impact upon the setting of individual heritage assets, and this would be cumulative across a considerable area of historic and natural landscape of

significant value and sensitivity. The development would therefore be contrary to the key presumption for the conservation of designated heritage assets, and the preservation and enhancement of their settings, as set out in Policies HE9 and HE10 of PPS5. Also, in the submitted Environmental Statement, insufficient weight has been given to the importance and sensitivity of the following heritage assets:

- Battlesden and Woburn Registered Parks and Gardens of special historic interest, with associated listed buildings;
- The Conservation areas of Sewell, Eggington, Tebworth and Hockliffe Church End;
- The important local 'landmark' feature of the spire of All Saints Church, Leighton Buzzard;
- The parish church of St. Mary the Virgin at Potsgrove.

DECISION

.....

.....