

Application No: 11/00524/F	Ward: Caversfield	Date Valid: 30/03/11
Applicant:	Moto Hospitality Ltd	
Site Address:	Cherwell Valley Service Area, Junction 10 M40, Northampton Road, Ardley	

Proposal: 1 No. 800kw wind turbine and associated works

1. Site Description and Proposal

- 1.1 The proposal is for the erection of 1 wind turbine and ancillary development including a short stretch of access track, an electronics enclosure, crane hardstanding and the erection of 1 no. temporary anemometer monitoring mast.
- 1.2 The turbine is proposed to have a hub height of 60 metres and a total height of 86.5 metres. This means that the rotor diameter is 53 metres. This compares to 84 metres height to hub and 125 metres total height for the 4 turbines approved on appeal at Ardley with Fewcott in July 2010. The turbine is proposed to be constructed in an area of open grass land located to the north of the service station buildings, but within the area controlled by Moto as the head lessee of the site. At either end of the open space are balancing ponds. The site is to the east of the M40 Motorway and A43, south and west of the B4100 and north of Stoke Wood.
- 1.3 The proposed main access to the site will utilise the existing access into the service area, but internally a new access track will run from the northern edge of the lorry park to the turbine.
- 1.4 A substation (electronics enclosure) is proposed. This accommodates a switchgear unit that transfers the electrical power from the turbine transformers to the electricity distribution system. The building is proposed to be approximately 3.5m by 5.2m in area and have a height of 3.9m. Its appearance is one of a typical pre-fabricated electricity cabinet and is to be located close to the turbine base. The submission sets out the hope that grid connections will be below ground to a new substation which was constructed at the time of the new services building which was designed to take account of the proposed turbine. In the event of this not being possible the connection may have to be to the substation at Ardley landfill site via a range of under and over ground lines. A condition was imposed on the Ardley with Fewcott appeal decision requiring that all connections were underground. A similar condition can be imposed for this development.
- 1.5 The monitoring mast is only proposed as a temporary structure for a period of up to 18 months and would be on approximately the same site as the proposed turbine. It would therefore be removed prior to the construction of the turbine. The mast would be a single mast secured by steel wires and would be 60 metres in height.
- 1.6 The site is not covered by any landscape designations but is in close proximity to conservation areas in Ardley, Fewcott and Stoke Lyne. Within these villages are also a number of listed buildings. There is also a listed building at Swifts House Farm approximately 1km from the site.
- 1.7 The closest properties to the turbine are at Swift House/The Lodge (at the entrance to Stoke Wood), approximately 660 metres from the turbine, Lone Barn (on the road to Stoke Lyne) approximately 770 metres from the turbine and the properties at Baynards Green, approximately 750 metres from the turbine. The closest properties in Ardley are located on Ardley Road at just over 1km away.

- 1.8 There are public rights of way that run close to the application site. Along the northern boundary of the site is bridleway 367/21. This appears to start/end to the west adjacent to the A43, run eastwards across the top of the site then runs south until it joins with bridleway 367/20. This second bridleway runs along the south of the service area and starts from the A43 and ends at B4100. Footpath 367/3 runs from the eastern boundary of the site towards the B4100, crosses it and continues to Stoke Lyne. There are other footpaths and bridleways in the vicinity.

2. Application Publicity

- 2.1 The application was publicised by way of press notice dated 29 April 2011 and site notices displayed in the following locations;
- a) Bridleway sign at Stoke Wood to north of Services
 - b) Access to Stoke Wood off B4100
 - c) Opposite the Old Rectory in Stoke Lyne
 - d) Lamp post by new services building
 - e) Public notice board at village hall in Ardley
- 2.2 2 letters/emails of objection have been received, including a letter from CPRE (Bicester and Ploughley District). Reasons for objecting include:
- Not a high wind speed site
 - Intrusive and alien development in sensitive farmland plateau and wooded estates landscape
 - Impact will be beyond well-shielded Motorway Service Area, accentuated by the moving blades
 - Well-populated and wide-open landscape interspersed with small villages will be sensitive to alien intrusion
 - Turbines could be visible for up to 15km. Given uncontoured nature of landscape and lack of intervening high ground the development will have unacceptable impact on heritage assets such as Aynho, Tusmore and Rousham
 - Impact on Conservation Areas at Ardley and Fewcott, Stoke Lyne, Fritwell and Juniper Hill
 - Close to permitted site at Fewcott – unacceptable inter-visibility
 - Impact on horse riders – turbine is within minimum suggested separation distance and not entirely screened
 - Impact on motorists along the M40 and entering the motorway service area
 - National government supports renewable energy along major transport areas but does not specifically refer to turbines. Policy C8 is still a relevant policy and resists sporadic development in vicinity of major road junctions
 - Little by way of renewable energy to offset the harm caused
 - Site wasn't identified in CAG report as wind speeds are too low

3. Consultations

- 3.1 **Ardley with Fewcott Parish Council** vehemently objects to the application. The Parish Council supports the views of Stoke Lyne Parish, Oxford Airport, British horse Society, OCC, BBOWT and Natural England. The proposal is not in keeping with the surroundings and could lead to more development along the M40 corridor. Local villages are at risk of being totally encircled by massive buildings – giving a negative

impact on the environment and is certainly not 'green' or justified.

- 3.2 **Stoke Lyne Parish Council** objects to the application on the grounds that it is inappropriate for the proposed location and will have a great impact on wildlife and the visual impact is unacceptable. Wind power is not reliable and the negative impact far outweighs any benefit.
- 3.3 **Fringford Parish Council** raises no objections
- 3.4 **Cherwell District Council's Rural Development and Countryside Manager** has stated that no public path order would be required to enable the proposed development.
- 3.5 **Oxfordshire County Council as Strategic Planning Authority** advises that the application should be considered against the South East Plan Policies and the objectives of Oxfordshire 2030 relating to climate change. The comments made in relation to the previous application are still valid and are summarised below;
 - Development has 800kW capacity which makes very modest contribution towards meeting South East Plan target of 140MW for the Thames Valley sub region.
 - Contribution to climate change is consistent with South East Plan climate change policies and strategic objective on climate change in Oxfordshire 2030.
 - Should ensure the development is compliant with Policy NRM15 of the South East Plan and that there will not be an unacceptable impact on the wildlife or protected species in close proximity to the proposal.
- 3.6 **Oxfordshire County Council's Field Officer** reiterated the comments made in relation to the previous application which are summarised below.

The turbine will be within the recommended distance suggested by the BHS but where this occurs it will be shielded from the bridleway by an existing bund and well established planting. This, it is believed, provides a significant mitigating measure which could allow the guidelines to be relaxed in this case. It is not therefore considered that this issue is of significant importance to object to the proposal, some concerns still exist though,

 - the turbine should be relocated so that it is more that falling distance from the bridleway so that in the event of it falling there is no potential impact on the bridleway
 - shadow flicker – is there a method of mitigating against it?
 - the suggested alternative bridleway routes are not appropriate
- 3.7 **Oxfordshire County Council as Local Highway Authority** raises no objections subject to conditions.
- 3.8 **The Highways Agency** has not objected to the application.
- 3.9 **Cherwell District Council's Anti-Social Behaviour Manager** raises no objections or observations as the noise assessment addresses the issues.
- 3.10 **Cherwell District Council's Ecology Officer** made the following comments
 - the need for further reptile surveys
 - the need for an updated badger survey in the event of an approval and a

significant time lapse

- able to accept recommendations for mitigation in relation to dormice but if it cannot be achieved a further dormice survey will be required
- a pre-works check will be required in relation to water voles
- Surveys for birds and bats are sufficient and the location of the turbine is broadly suitable to minimise impacts although Natural England should be consulted as there stand off of 50m in relation to bats is not adhered to in every direction. It is not thought that the disturbance that may occur would constitute 'harmful disturbance'.
- Would be desirable to see proposals for biodiversity enhancements

- 3.11 **Berks, Bucks & Oxon Wildlife Trust** recommended refusal of the application and the basis that it is not clear that mitigation measures can be complied with in relation to dormice and bats and the minimum stand-off of 50m in relation to bats is not met.
- 3.12 **Natural England** objected to the application on the basis that there was insufficient information to satisfy them that there will be no adverse impact on the landscape. In relation to protected species they are happy to defer to the in house ecologist. After further clarification was sought with regard to the objection it was suggested that the assessment of landscape impact and impact on visual receptors was for the District Council to assess.
- 3.13 **Banbury Ornithological Society** does not consider that the works give cause for concern on ornithological grounds.
- 3.14 **English Heritage South East Region and East Midlands Region** do not provide detailed comments on the proposal but states that the application should be determined in accordance with national and local policy guidance, and on the basis of your specialist conservation advice.
- 3.15 **British Horse Society (BHS)** in general supports government's renewable energy strategy but the application may present problems for equestrians on nearby bridleways.
- BHS policy states that ideally there should be a 200m exclusion zone around bridleways to avoid turbines frightening horses...but some negotiation should be undertaken if this cannot be achieved.
 - If 200m cannot be achieved a distance of three times the overall height of the turbine should be sought
 - The proposed turbine is less than 200m away from the bridleway, at one point it is only 76 metres
 - Shadow flicker is a concern
 - Using alternative routes in the area is not an appropriate mitigation measure
 - Conditions suggested in the event of an approval
- 3.16 **Network Rail** has no objection or comment to make.
- 3.17 **Southern Gas Networks** has no gas mains in the area.
- 3.18 **The Environment Agency** considers that the application is of low environmental risk and as such has not commented on the proposal.

- 3.19 **London Oxford Airport** objects to the application. The proliferation of the turbines in the area is a major concern as they will affect the performance of the radar which is planned to be operational by March 2012. The cumulative impact of the proposed turbines and the turbines approved previously is a particular concern.
- 3.20 **The MOD (Safeguarding)** has no objection to the application but in the interest of air safety the turbines should be fitted with appropriate lighting and in the event of an approval they should be notified of construction dates, the maximum height of construction equipment and the precise location of the development.
- 3.21 **NATS (National Air Traffic Services)** on behalf of **NERL** states that the development has been examined from a technical safeguarding aspect and does not conflict with safeguarding criteria. Accordingly, NATS (En route) Public Limited Company (“NERL”) has no safeguarding objection to the proposal.
- 3.22 **The Joint Radio Company (JRC)** analyses proposals for wind farms on behalf of UK Fuel and Power Industry and the water Industry. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements. JRC does not foresee any potential problems.
- 3.23 **Aylesbury Vale, West Oxfordshire and South Northamptonshire District Council’s** have no comments to make or objections to the proposal.

4. Planning Policy

4.1 South East Plan

CC1 – Sustainable Development
CC2 - Climate Change
NRM13 – Regional Renewable Energy Targets
NRM14 – Sub-regional Targets for Land Based Renewable Energy
NRM15 – Location of Renewable Energy Development

4.2 Adopted Cherwell Local Plan 1996

C7 – Landscape Conservation
C8 – Sporadic development in the Open Countryside
ENV1 – Materially detrimental levels of noise etc

4.3 Non-Statutory Cherwell Local Plan 2011

EN21 – Renewable Energy Schemes
EN34 – Landscape Character

4.4 Regional and National Guidance

PPS1, Delivering Sustainable Development
Planning and Climate Change – Supplement to PPS1
PPS7, Sustainable Development in Rural Areas
PPS9, Biodiversity and Geological Conservation
PPS5, Planning and the Historic Environment
PPS22, Renewable Energy and its companion guide
PPS23, Planning and Pollution Control
PPG24, Planning and Noise
PPS25, Development and Flood Risk

4.5 **Other Relevant information**

Government policy statement, '**Building a Greener Future**' (July 2007) and the **Energy White Paper** (May 2007) – emphasis on the pressing need for action on climate change and contributions towards national carbon emissions reductions targets.

The Draft Core Strategy (February 2010) (although not adopted and therefore does not have the weight of adopted policy it contains the following relevant policies) - draft Policy SD3 sets out the criteria to be assessed in considering renewable energy proposals, and is based on a recent evidence study, the **Cherwell Renewable Energy and Sustainable Construction Study** (September 2009).

The Council has produced informal planning guidance entitled '**Planning Guidance on the Residential Amenity Impacts of Wind Turbine Development**' (February 2011). This document provides guidance on separation distances between large scale wind turbines and residential development. This document is not part of the statutory development plan but was subject to consultation and has been adopted by the Council as informal planning guidance.

4.6 **History**

10/00308/F – 800kW turbine, submitted in March 2010, withdrawn in May 2010.

5. Appraisal

5.1 The key considerations when assessing an application for wind turbines are listed below;

- Planning policy
- The benefits of the scheme in terms of the renewable energy generated
- Landscape and visual impact
- Impact on the historic environment
- Impact on residential amenity (noise, shadow flicker, safety, TV reception, construction activity)
- Proximity to roads and public rights of way
- Impact on protected species
- Impact on aviation and telecommunications
- Highway safety

Each of the above issues will be addressed in turn.

5.2 **Planning policy**

5.2.1 Tackling climate change is a key Government priority for the planning system (as stated in the Planning and Climate Change Supplement to PPS1). National policy, including PPS1 (Delivering Sustainable Development), the Planning and Climate Change Supplement to PPS1, PPS22 (Renewable Energy) and its Companion Guide, promotes the development and use of renewable energy.

5.2.2 The Supplement to PPS1 advises that where there is any difference in emphasis on climate change between the policies in PPS1 and others in the national series, PPS1 takes precedence (Para 11). It also suggests that planning authorities should ensure any local approach to protecting landscape and townscape does not preclude the supply of any type of renewable energy other than in the most

exceptional circumstances (Para 20). It goes on to state that even in the absence of up to date development plan policies planning authorities should make their position very clear in terms of their intentions to address climate change and work closely with applicants to achieve sustainable development.

- 5.2.3 Paragraph 1 (ii) of PPS22 states that the wider environmental and economic benefits of all proposals for renewable energy projects, whatever their scale, are material considerations that should be given significant weight in determining whether proposals should be granted planning permission. Section (vi) of the same paragraph goes on to state that small scale projects can provide limited but valuable contribution to overall outputs of renewable energy and planning authorities should not reject planning applications simply because the level of output is small. Paragraph 15 states that local landscape and local nature conservation designations should not be used in themselves to refuse planning permission for renewable energy developments.
- 5.2.4 PPS7 (Sustainable Development In Rural Areas) indicates that local authorities should;
“provide for the sensitive exploitation of renewable energy sources in accordance with the policies set out in PPS22’. PPS7 also seeks to ‘raise the quality of life and the environment in rural areas through the promotion of ...local distinctiveness and the intrinsic qualities of the countryside’ and to ensure the ‘continued protection of the open countryside for the benefit of all”.
- 5.2.5 The generation of renewable energy will contribute towards the sub regional and regional targets as set out in the South East Plan policy NRM13 and 14 and subsequent carbon reductions as set out in policy CC2. Policy NRM15 of the South East Plan goes on to refer to the location of renewable energy projects stating that;
“Renewable energy development, particularly wind and biomass, should be located and designed to minimise adverse impacts on landscape, wildlife, heritage assets and amenity. Outside of urban areas, priority should be given to development in less sensitive parts of countryside and coast, including on previously developed land and in major transport areas.” The site is not in a designated landscape, and is alongside the M40 and A43, with the B4100 to the north and east. Therefore the location accords with this element of the South East Plan policy. In relation to minimising landscape, wildlife and heritage impacts further assessment is made elsewhere in this report. Although there are proposals for the withdrawal of Regional Spatial Strategies in the Localism Bill they remain capable of being material considerations in the determination of planning applications.
- 5.2.6 The adopted Cherwell Local Plan 1996 does not contain any specific policies on renewable energy. However Policy C7 seeks to prevent development that would cause demonstrable harm to the topography and character of the landscape and policy C8 seeks to prevent sporadic development in the open countryside including development in the vicinity of motorway or major road junctions.
- 5.2.7 Policy EN21 of the Non-Statutory Cherwell Local Plan 2011 states that;
“Proposals for renewable energy schemes will be permitted provided that such development would not cause significant harm to the local environment. Proposals will be considered against the following:

- i) landscape impact;
- ii) the protection of features or areas of historical and archaeological interest;
- iii) protection of wildlife habitats and species;
- iv) impact on residential amenity;
- v) traffic generation;
- vi) the economic and environmental benefits of the scheme; and
- vii) whether opportunities have been taken to include combined heat and power facilities or recover waste heat for use in other processes in appropriate cases.”

- 5.2.8 The supporting text states that “mean wind speeds are high enough mainly on the higher ground in some parts of the County to make the development of wind turbines viable. However, due to the nature of the wind resource and environmental constraints, it is unlikely that large-scale wind farms will be feasible or appropriate. Single turbines or very small groups could be viable, which would serve farms or small hamlets. The main considerations from any schemes will be their impact on the landscape, on historic or ecological sites and residential amenity including noise and shadow flicker” (para 9.43).
- 5.2.9 It is important to note that national policy relating to renewable energy has progressed rapidly and there are several more recent statements of national policy and emerging regional policy which represent material considerations in the determination of planning applications. The main documents are referred to above, the supplement to PPS1 and PPS22.
- 5.3 The benefits of the scheme in terms of the renewable energy generated
- 5.3.1 PPS22 states that development proposals should demonstrate any environmental, economic and social benefits. The need for a turbine in this particular location may be considered a relevant consideration. However, whilst the benefits of such a scheme are a material planning consideration, it should be noted that the Climate Change Supplement to PPS1 states that Local Authorities should “not require applicants for energy development to demonstrate either the overall need for renewable energy and its distribution, nor question the energy justification for why a proposal for such development must be sited in a particular location.”
- 5.3.2 Despite this the applicant sets out that the turbine would form part of a number of energy reducing and offsetting measures on the services site. The 800kW wind turbine would cover the service areas energy demand, effectively making it carbon neutral. This being a small contribution to the overall renewable energy targets. However as previously referred to PPS22 states that small scale projects can provide limited but valuable contribution to overall outputs of renewable energy and planning authorities should not reject planning applications simply because the level of output is small.
- 5.3.3 Representations have suggested that the site is not windy enough to generate the amount of power suggested. The Renewable Energy and Sustainable Construction Study which provides the evidence base for the LDF demonstrates that the site experiences an average wind speed of between 6 metres per second (m/s) and 6.5m/s in which there are some opportunities for wind turbine developments. More viable schemes are obviously likely to occur where wind

speeds are higher than 6.5m/s and this site does not fall within this wind speed. However paragraph 1 of Chapter 8 of the technical annex to the Companion Guide to PPS22 states that 'developments in technology and the electricity market over recent years now mean that wind power is found to be viable across the UK. As such wind farm developments can reasonably be expected to be proposed in all regions of the country'. Based on this information it would not be advisable to refuse the application based on wind speeds, viability of the scheme or this contribution made towards the renewable energy targets.

Landscape and visual impact

- 5.4
- 5.4.1 The need for renewable energy is clearly set out in Government policy and planning policy at all levels. A key consideration of the proposal will therefore be its impact on landscape character and visual amenity, and whether this will result in such significant harm as to outweigh the scheme's renewable energy benefits.
- 5.4.2 The applicant has undertaken a landscape and visual impact assessment (LVIA). The Council appointed a firm of landscape consultants, Aspect Landscape Planning, to assess the landscape and visual impact assessment. Some of their comments and conclusions are fed into the following considerations.
- 5.4.3 The main source of guidance to assess landscape and visual impact is the document entitled 'Guidelines for Landscape and Visual Impact' produced by The Landscape Institute and Institute of Environmental Management and Assessment (LI/IEMA 2002). The methodology used in the submitted LVIA is considered robust, utilising criteria set out in the Guidelines. It is also considered that the assessment of landscape sensitivity and significance of landscape and visual effects is robust.
- 5.4.4 The study area should contain all of the likely significant effects of the proposal on any component of the landscape and visual resource. The applicant chose a study area of 10km radius from the centre of the development site which was considered appropriate given the nature of the proposal being a single turbine and of a height of 86.5 metres.
- 5.4.5 It is considered that the landscape character assessment and key viewpoints presented within the submitted LVIA represent an appropriate appraisal of the baseline conditions associated with the site and its setting.
- 5.4.6 Within the LVIA, the assessment identifies that, in agreement with the Council, the Cherwell District Landscape Assessment 1995 was the most appropriate assessment upon which to base the assessment of effects in terms of character. The site lies within the Oxfordshire Estate Farmlands, as identified within the LVIA, with the Upper Heyford Plateau character area lying just to the west. The Cherwell District Landscape Assessment provides a detailed appraisal of the character of the district outlining key landscape features and characteristics. It is considered that the assessment forms a robust basis for the assessment of effects arising from the proposed development upon landscape character.
- 5.4.7 As noted within the LVIA, land 500m to the north east of the site is designated as an Area of High Landscape Value, while land some 3km to the north is designated as a Special Landscape Area. Although Planning Policy Statement 7: Sustainable Development in Rural Areas seeks to remove local landscape designations, it is considered that the sensitivity of landscapes currently covered by such

designations should be afforded appropriate consideration.

- 5.4.8 With regard to the visual environment the key viewpoints have been agreed with the Council and it is considered that the viewpoints represent a fair reflection of the site's visibility. The key viewpoints accord with the Zone of Theoretical Visibility (ZTV), which accompanies the application, and take into account local settlements, footpaths, motorway and road corridors and the setting of historical features.

5.5 ***Assessment of Effects Landscape Impact***

- 5.5.1 The site lies within the Oxfordshire Estate Farmlands which is identified within the Cherwell District Landscape Assessment as being a large-scale agricultural landscape. Man-made elements such as the M40 and A43 road corridors introduce significant elements which characterise the western part of this landscape area within the localised setting of the site. The proposal will have a direct impact upon this landscape character area, introducing a vertical element into longer distance views which is not currently associated with the area. The direct impact of the proposal will be localised, with indirect effects extending to around 2km.

- 5.5.2 As noted within the submitted LVIA, the proposal will give rise to a sub-type landscape character area, Oxfordshire Estate Farmlands with Wind Turbine. It is considered that this landscape, albeit in reasonably good condition, has the capacity to accommodate a degree of change. The landscape is identified as being characterised by large-scale arable fields separated by areas of mature woodland. It is considered that such large-scale landscapes have a greater capacity to accommodate wind farm development. The proposal is located within a part of the character area which has experienced a considerable degree of change as a result recent developments such as the highways network and the service area and as such is less sensitive to change. The proposed single turbine will ensure that the effect is localised and while the proposal will result in a significant change within a 1.5-2km radius, it is considered that the landscape of the Oxfordshire Estate Farmlands can accommodate the proposal without resulting in an unacceptable degree of change.

- 5.5.3 The Upper Heyford Plateau lies just to the west of the site, with the A43 / M40 junction forming the transition between the two character areas. As with the Oxfordshire Estate Farmlands, this is another large-scale agricultural landscape with a number of significant man made features present within the localised setting of the site. The proposal, although located outside of this character area, will give rise to a sub-type, Upper Heyford Plateau with Wind Turbine within 2km of the development. It is considered that the degree of change will be significant, although, as outlined above, the single nature of the proposal will ensure that this is localised to within a 2km radius.

- 5.5.4 The proposal will result in a significant impact upon the localised landscape setting. However, existing land cover will create a degree of containment, limiting the perceived effect of the proposal to within 2km of the site. This will affect two separate character areas, however, it is considered that both have an ability to accommodate a degree of change. It is also noted that the extent of the perceived effect is relatively localised and will not affect a significant proportion of the overall character types affected. Therefore it is considered that the conclusions reached

within the submitted LVIA are appropriate and Aspect is in agreement with the extent of effects and the acceptability of the proposal given the prevailing landscape context. It is Aspect's opinion that the proposal can be accommodated within the localised landscape setting without adversely affecting the wider landscape context or resulting in permanent damage.

5.5.5 ***Effect upon Landscape Designations***

Under current policy, the landscape around 500m to the north east of the site is designated as an Area of High Landscape Value. As noted above, PPS7 seeks to remove local landscape designations, however, it is considered that the sensitivity of areas covered by such designations should be given additional weight. The assessment of effects upon landscape character identifies that the perceived extent of the proposal will be around 2km from the site. The proposal will therefore have an indirect effect upon the south western part of the designation. Due to the sensitivity of the landscape, it is considered that the proposal will have a significant effect upon the localised part of the AHLV covered by the 2km radius extent of anticipated effects. It is considered however, that the degree of change upon the landscape designation is acceptable. The AHLV covers a considerable area within the northern part of the District, and it is considered that the extent of the designation that will be affected by the proposal forms a small proportion of the designated landscape and is positioned on the peripheries. It is therefore considered that the proposal can be accommodated without unacceptably affecting the AHLV designation.

5.5.6 ***Visual Impact***

With regard to the visual impact, based on the 13 views presented within the submitted LVIA, Aspect anticipate a significant degree of change within most of these views where intervening vegetation and built form is not present to contain the proposal. The proposal will introduce a prominent new feature and significant vertical element within the landscape. Having visited the site and the key viewpoints, Aspect would concur with the assessment that the proposal will result in significant visual effects up to 3km from the site.

5.5.7 The proposal will affect views from a number of key locations within the localised setting including: Stoke Lyne; Ardley; Fewcott; Fritwell; Bucknell; several dispersed dwellings; Tusmore Park; M40 motorway; A43 road corridor; B4100 road corridor; and a number of local footpaths.

5.5.8 With regard to the effect of the proposal upon the localised settlements listed above it is considered that the effects of the proposal will generally only be experienced by a limited number of properties on the edges of the village. Due to the residential nature of these properties the sensitivity of the receptors is high, and where the proposal has an unobstructed view, the proposal will have a significant effect upon the visual amenities of these properties. Properties set back from the edges of the village are likely to experience a reduced degree of intervisibility, due to intervening built form and vegetation, and as such the effect becomes less significant. It is considered that where the proposal is visible from the properties within these settlements, the localised landscape character together with intervening landscape elements will ensure that the proposal does not have an overbearing effect upon the dwellings.

5.5.9 Several dispersed properties are identified within the localised setting of the site,

including Swift House/The Lodge, Lone Barn, several properties at Baynards Green and Swifts House Farm. The proposal will result in a significant visual effect upon these properties, however, established vegetation structure associated with the curtilages of the properties, together with the intervening landscape setting will filter views. The single nature of the proposal means that the horizontal extent of the scheme is limited and therefore, where it is visible from the dwellings, the turbine would only occupy a narrow extent of the panorama. It is therefore considered that although the proposal will have a significant effect upon these localised properties, the localised landscape structure and narrow horizontal extent of the proposal, will ensure that the impact of the development will not be overbearing.

- 5.5.10 From Tusmore Park, the proposal will be visible from the southern edges of the estate. The turbine will introduce a significant vertical element into the landscape context of views from this location. It is considered that the proposal will have a significant impact upon the southern edges of the estate. However, established vegetation associated with the grounds will reduce the intervisibility between the house and the proposal and it is considered that the effect upon the overall character of the estate will not be unacceptable in landscape and visual terms.
- 5.5.11 The proposal will be visible from a number of transport routes within the localised setting, including the northbound and southbound M40, the southbound A43, the B4100 and other local roads. It is considered that the proposal will have a significant effect upon users of these roads up to 2km from the site. However, intervening landscape features, together with the transient nature of receptors on these routes will ensure that the effect of the proposal is not unacceptable.
- 5.5.12 From the localised footpath network, it is considered that the sensitivity of receptors using the network is high. Intervening vegetation structure will create a degree of visual containment along parts of the network, however, where footpaths cross fields or are aligned with the site, views of the turbine will be available. The proposal will be visible from a number of points on the local network, introducing a prominent vertical element into the landscape and as a result will have a significant effect.
- 5.5.13 Within longer distance views, intervening vegetation will create a degree of visual separation and containment, reducing the overall significance of the effect upon these views. Beyond the 3km radius, the proposal may be visible from certain viewpoints, introducing a vertical element into the landscape setting, however, distance and intervening vegetation structure, together with the larger scale character of the wider landscape context will ensure that the effect of the turbine is not significant.
- 5.5.14 **Cumulative Impact**
With regard to the cumulative effect of the proposal, the scheme must be appraised in relation to the approved scheme at Fewcott. As noted within the submitted LVIA, cumulative effects upon the landscape and visual environment can arise in 3 ways:
- Appearance of the existing and proposed turbines within the landscape in relation to good design principles;
 - An increase in incidence of turbines within views from fixed locations; and
 - The increase of incidences of turbines as one moves through a landscape.

- 5.5.15 In terms of the cumulative effect upon landscape character, both schemes will give rise to character sub-types affecting the Oxfordshire Estate Farmlands and Upper Heyford Plateau. It is considered that the extent of the effect, as a result of the Cherwell Valley scheme, will not extend beyond the perceived extent of effects resulting from the Fewcott scheme. Therefore, rather than extending the perceived extent of the approved development, the proposal will reinforce the existing effects of the Fewcott scheme. It is therefore considered that the cumulative effect upon landscape character will not be unacceptable.
- 5.5.16 With regard the cumulative effect upon the visual environment, it is considered that additional viewpoints which were prepared assist in providing a robust overview of the cumulative effect of the proposal in relation to the Fewcott scheme. Within many of the views the proposal will be perceived as a separate entity, of similar scale to the approved development at Fewcott. From Stoke Lyne, the proposal appears as a natural extension to the Fewcott scheme. From Fritwell there will be a degree of overlapping, however, it appears from the montage that the blades of the approved and proposed turbines will not visually clash.
- 5.5.17 The approved development at Fewcott will result in significant visual effects upon the localised landscape setting. It is considered that the proposal will contribute to this existing effect, but will not increase the extent of this effect upon residential receptors. The two developments will be perceived as separate entities from certain viewpoints, particularly by road users on the M40 and A43. Based on the criteria above, this would seem to increase the incidence of wind turbines within fixed viewpoints, however, the transient nature of road users should also be considered, and therefore the sensitivity is reduced. Road users will experience a localised wind farm landscape as they approach the two sites, however, the location of the two sites will ensure that the sequential perception is not extended as a result of the proposal. The Fewcott scheme will be visible on these approaches, giving rise to a localised wind farm landscape. It is considered that the introduction of the single turbine at Cherwell Valley Services will not increase the extent of the perceived experience and as such extent of the cumulative effects will be limited.
- 5.5.18 It is therefore considered that although the proposal will give rise to significant effects within the localised landscape setting and visual environment, there will be a considerable degree of overlap of effects resulting from the approved Fewcott scheme and although the proposal will contribute to the significant effect within the localised setting, it will not extend the significant effects beyond the existing perceived extent. It is therefore considered that the cumulative effects would not be unacceptable.
- 5.5.19 ***Conclusions on Landscape and visual assessment***
- It is considered that the proposal will result in a significant impact upon landscape character and the visual environment within a 3km radius of the site. The effect of the proposal upon the landscape and visual receptors within this area will be significant. Within the immediate setting of the site, the landscape character will change as a result of the introduction of the turbine creating a new sub-type. However, it is considered that the scale of the proposal is appropriate given the larger scale of the landscape within which it will be set.

- 5.5.20 The proposal will be visible from a number of properties within the localised setting and nearby settlements, as well as the localised road and footpath network. Intervening vegetation structure will afford a degree of visual containment, however, unobstructed views of the turbine will be available from a limited number of properties. It is considered that given the single nature of the proposal and the larger scale landscape setting, the development will not dominate or have an overbearing effect upon such views and as such the visual environment has the potential to accommodate the proposal.
- 5.5.21 In terms of the cumulative effect of the proposal, it is considered that there will be a considerable degree of overlap in terms of the impacts resulting from the Fewcott scheme and the proposal. It is considered that the extent of effects as a result of the Fewcott scheme will envelop those resulting from the proposal and as such, although the proposal will contribute to the significant landscape and visual effects of the Fewcott scheme, the proposal will not extend the perceived effects. It is considered that the proposal will not result in a perceived intensification of the Fewcott scheme or the incidence of wind turbines within an extended area of landscape. It is considered that the proposal will largely appear as a natural extension to the Fewcott scheme, or will appear sufficiently separated to ensure that good design principles are reflected and the proposal is a stand-alone development. It is therefore considered that the cumulative effect of the proposal will not result in an unacceptable impact upon landscape character and the visual environment.
- 5.5.22 As an overview, Aspect would therefore concur with the conclusions reached by the submitted LVIA that the landscape and visual environment has the potential to accommodate the scale of development as proposed at Cherwell Valley Services. It could therefore be argued that in relation to landscape impact the development sits comfortably within the national guidance policies on renewable energy.
- 5.5.23 In relation to landscape impact and compliance with Cherwell adopted policies the position may not be quite so clear. It could be argued that Policy C7 of the adopted Cherwell Local Plan which discourages development that would cause demonstrable harm to the topography and character of the landscape is not complied with due to the very nature of the development being a tall structure in an otherwise low lying landscape. However it has previously been identified that the character of the area is one of a large scale which is more capable of accommodating change and has done so previously through the introduction of the motorway and service area. The Inspector, in relation to the appeal for the four turbines concluded that in relation to policy C7 there would be no development of such a scale that would alter the topography of the site and although there would be change to the character of the landscape there would not be harm and as such policy C7 was satisfied. Given that this development only consists of one turbine and is of a smaller scale than those approved at appeal it is difficult to reach a different conclusion and it is therefore considered that Policy C7 is complied with in this instance and it would be difficult to defend a reason for refusal on these grounds.
- 5.5.24 The Council also sought to defend the reason for refusal in relation to the Fewcott wind farm on the grounds of the proposal being contrary to Policy C8 of the adopted Cherwell Local Plan which seeks to prevent sporadic development in the open countryside and near to motorway or major road junctions. However in the appeal decision the Inspector concluded that when applied to renewable energy

development Policy C8 is at odds with Policy NRM15 of the South East Plan which states that “outside of urban areas, priority should be given to [renewable energy] development in less sensitive parts of countryside and coast, including on previously developed land and in major transport areas”. Because Policy NRM15 more closely follows the direction of current national planning policy the Inspector attributed more weight to policy NRM15 than policy C8. As with policy C7 above it is not considered that a refusal reason based on C8 of the adopted Cherwell Local Plan would be defensible in this instance. It is also considered that the cumulative affect of both the approved scheme and submitted proposal will not cause sufficient harm to warrant a reason for refusal.

5.6 Impact on the historic environment

5.6.1 Heritage impact has been assessed within a 5km radius from the site. Two heritage assets have been used as locations from which to take viewpoint photomontages. Those being Tusmore Park the site of a Scheduled Ancient Monument and Aynho Park a registered park and garden. Within the 5km radius there is one other registered park and garden (Middleton Park) and other Scheduled Ancient Monuments at Upper Heyford. There are also a number of listed buildings within the same radius, the closest being in the settlements of Ardley with Fewcott, Stoke Lyne and isolated buildings at Swifts House Farm and Baynards Green.

5.6.2 The Conservation Areas of Ardley, Fewcott, Fritwell and Upper Heyford are within 2km of the site and have been considered. Although Conservation Areas are not specifically referred to in the landscape and visual impact assessment above the level of harm caused to nearby conservation areas is likely to be of a similar level as the assessment made at paragraph 5.5.8 above. The proposal will result in an impact on these conservation areas but it is not likely to be significant and it is considered that the need for renewable energy development outweighs the adverse effect on the setting of Conservation Areas.

5.6.3 Two branches of English Heritage (EH) have been consulted as Aynho Park falls outside of the South East Region. Neither branch has made any specific comments in relation to the scheme. This reflects the view they reached in relation to the Fewcott wind farm proposal in which they commented that the impact upon views of Registered Landscapes is not significant. This is a result of the distances involved. Rousham is just 8km from the site (therefore not considered in the study area for heritage impact). However the upper sections of the turbine may be glimpsed but this is incidental and is not considered to cause harm. English Heritage is satisfied for the Council to make a judgement on whether the setting of Heritage assets is harmed.

5.6.4 The conclusion reached with regard to the two registered parks and gardens in relation to the Fewcott windfarm was that the potential effect upon their setting is not significant. Given that there are similar distances between these features and the proposed turbine it is considered that the same conclusion can be reached and this is the view reached in the submitted landscape and visual impact assessment.

5.6.5 Juniper Hill is just less than 5km away from the site and is referred to specifically by one of the objectors as being one of the locations that may be harmed by the proposal. The distance referred to is a similar distance than that between Juniper

Hill and the approved scheme at Fewcott. At the time of defending its reasons for refusal the Council did not consider the impact on Juniper Hill would be harmful therefore given the proximity of the two development sites and the smaller scale of the proposed turbine it would seem unreasonable to argue that the effect of the turbine would cause particular harm to Juniper Hill.

5.6.6 In addition to the above points it could also be argued that any effects would only be temporary. Whilst this temporary effect may last up to 25 years it could be argued that this is short term in relation to the timescales of cultural heritage.

5.6.7 The Council fought the appeal for the Fewcott wind turbines partially on grounds of harm to heritage assets but these arguments were not wholly supported by the Inspector. It was acknowledged that there would be some moderate/slight effects and some changes of moderate significance. However the harm was not considered to be sufficient enough or long term enough to outweigh the benefits of the scheme. It is unlikely that a case could be defended on the grounds of heritage impact in relation to a single turbine of a smaller scale than those already approved where cumulative impact has been assessed and is not considered to be detrimental.

5.6.8 Since the appeal decision was issued the Council's informal Guidance was produced which makes reference to heritage impacts. In relation to heritage impact the guidance is complied with as heritage assets have been assessed up to 5km from the site and it is not considered that any significantly adverse impacts on designated heritage assets have been identified within 2km of the site.

5.7 **Impact on residential amenity**

5.7.1 The Renewable Energy and Sustainable construction Study contains a plan that identifies areas of the district where wind speeds are over 6.5m/s and also more than 800m from any residential properties, thus suggesting that it is only these locations where wind turbines developments would be acceptable. However the document was produced to provide an evidence base for the production of the LDF and not dictate where future development would or would not be permitted. The site does not fall within the areas identified in the Study.

5.7.2 The proposed turbine is located over 1km from the nearest dwellings at Ardley and Fewcott in accordance with the Council's informal planning guidance relating to separation distances and large scale wind turbines (recommending a minimum separation distance of 800m). It is approx 770m from a dwelling called 'Lone Barn' on the opposite side of the B4100, and approx 660m from a dwelling called 'The Lodge' adjoining the B4100 at the junction with the Stoke Lyne road, which is not in accordance with the recommended separation distance set out in the guidance document. However the document further advises that appropriate distances may also be influenced by the orientation of views, the local effects of trees, other buildings, and the topography, as well as other issues such as noise, safety, shadow flicker and so on.

Visual Impact on residential properties

5.7.3 This assessment has been covered in the landscape and visual impact

assessment section of the report. Given the turbine's relationship with nearby properties and the fact that there is intervening landscaping and changes in land level there will be no direct views of the entire turbine from residential properties. The lower section of the turbine will be hidden by trees which currently screen the service area. Whilst the turbine has the potential to have significant visual effects on residential properties the characteristics of the proposal, being a single horizontal feature will only appear in a narrow field of view, and the nature of the residential curtilage and the surrounding landscape features it is considered that the turbine will not be overbearing. Therefore justifying a reduction in the suggested separation distances set out in the Council's informal guidance. Furthermore in relation to the informal guidance it is not clear what 'group' the proposed turbine would fall into. The capacity of the turbine is 800kW making it a 'medium' scale turbine. However the height of 86.5m to blade tip falls between the two groups, 'large' and 'medium'. The suggested separation distance of 800m refers to 'large' scale turbines therefore suggesting that the distance can be reduced for smaller turbines. For reasons of residential amenity a different separation distance is suggested, that being at least three times the turbine height. For this proposal the distance would therefore be 259.5 metres and no residential property lies within this distance. Whilst the proposal does not wholly comply with the Council's informal guidance it is not considered that particular harm will be caused in relation to visual impact on residential properties. Furthermore there is no statutory distances relating to residential amenity currently in place in England and as such the Council would have to have a strong argument for refusing this application on grounds of visual harm to residential amenity if it were to successfully defend it at appeal.

Noise

- 5.7.4 It should be noted that the site is located close to the M40 motorway which produces a significant level of noise at the site and in the surrounding environment.
- 5.7.5 Noise can have an adverse effect on the environment and the quality of life enjoyed by individuals and communities. Whilst representations received haven't referred specifically to noise it is common concern with regard to the operation of wind turbines.
- 5.7.6 The applicant has undertaken an assessment of operational noise impacts in line with ETSU-R-97 'The Assessment and Rating of Noise from Wind Farms'. This provides the framework for the measurement of wind farm noise and for deriving suitable noise limits to offer a reasonable degree of protection to wind neighbours without placing unreasonable restrictions on wind farm development. PPS22 recommends the use of ETSU-R-97 for assessing wind farm noise.
- 5.7.7 Background noise levels have been established through monitoring at 4 locations, including residential properties which are considered to be the most sensitive potential receptors. The noise monitoring locations are spread around the site of the proposed turbine i.e. some will be upwind and some downwind and include the closest residential properties. Therefore one can infer that noise levels at properties further removed will be less than the worst case as modelled.
- 5.7.8 The assessment and Rating of Noise from Wind Farms' (ETSU-R-97) states that

noise from the wind farm should be limited to 5 dB (A) above background for both day and night time, remembering that the background level of each period may be different. A fixed limit of 43 dB (A) is recommended for night –time. This is based on a sleep disturbance criteria of 35 dB (A) with an allowance of 10 dB (A) for attenuation through an open window and 2 dB (A) subtracted.

- 5.7.9 Noise mitigation has been incorporated into the scheme, through the selection of the turbine. The Enercon E53 is variable speed and direct drive. The variable speed reduces the speed of rotation of the blades and therefore lowers the blade tip speed, reducing the aerodynamic noise of the blades passing through the air. The direct drive design eliminates the need for a gearbox and reduces the generator speed from the usual 1500 rpm (in a standard turbine) to the same speed as the rotor (16-32 rpm). The mechanical noise output from the generator assembly is therefore substantially reduced. The results of the noise survey demonstrate that operational noise limits are not likely to be exceeded. Conditions can be imposed to require that the specified noise limits are not exceeded.
- 5.7.10 Cumulative noise impact of the proposed single turbine and the permitted wind farm development has also been considered and the impact is considered to be insignificant.
- 5.7.11 The Council's Anti-Social Behaviour Manager is satisfied with the documentation submitted in relation to noise and has not raised any objections in relation to the noise impacts of the proposal.
- 5.7.12 Low Frequency Noise (Infrasound) is also a common concern relating to wind turbine developments. The PPS22 Companion Guide asserts that there is no evidence that ground transmitted low frequency noise from wind turbines is at a sufficient level to be harmful to human health.
- 5.7.13 **Shadow Flicker**
- Shadow Flicker occurs as a result of the sun passing behind the rotors of a wind turbine, casting a moving shadow over nearby properties. The likelihood of this occurring and its severity depends upon the relationship between the turbine, the dwelling, and the path of the sun; the turbine hub height and rotor diameter; the time of the year; the proportion of daylight hours in which the turbine can operate; and the frequency of bright sunshine. For example, shadow flicker will not occur in periods of full cloud cover, and its impact will be reduced in overcast skies. The PPS22 Companion Guide illustrates how the duration of such an effect is likely to be very limited: *'A single window in a single building is likely to be affected for a few minutes at certain times of the day during short periods of the year'*.
- 5.7.14 Shadow flicker has been proven to occur only within ten rotor diameters of a turbine. The proposed turbine has a rotor diameter of 53m therefore flicker affect is only likely to occur within and up to 530m away from the turbine. There are no residential properties within this distance and the hotel at the service station is located outside of the potentially affected area as it is to the south of the proposal. It is therefore highly unlikely that any residential property will be affected by shadow flicker.
- 5.7.15 The effect of shadow flicker on the nearby bridleways has been assessed. It has

been calculated that in the worst case scenario shadow flicker along the bridleway is only likely to occur between 06.10GMT and 07.10GMT and at the point potentially worst affected for a maximum of 60 hours per year, possibly for an hour on each of the days where conditions are conducive to shadow flicker. It is possible to prevent this by requiring that the turbine does not operate during the likely time of occurrence. A condition requiring a mitigation strategy can be imposed in the event of an approval.

5.7.16 Turbines can cause flashes of reflected light, which can be visible for some distance. It is possible to ameliorate the flashing but it is not possible to eliminate it. Careful choice of blade colour and surface finish can help reduce the effect. Light grey semi-matt finishes are often used for this.

5.7.17 **Safety**

5.7.18 In terms of safety, PPS22 clearly states that experience indicates that properly designed and maintained wind turbines are a safe technology. The very few accidents that have occurred involving injury to humans have been caused by failure to observe manufacturers' and operators' instructions for the operation of the machines. There has been no example of injury to a member of the public. The minimum desirable distance between wind turbines and occupied buildings calculated on the basis of expected noise level and visual impact will often be greater than that necessary to meet safety requirements. Fall over distance plus 10% is often used as a safe separation distance. This distance is met in relation to this scheme.

5.7.19 Ice fall from turbines is often expressed as a concern, especially where the turbines are in proximity to public rights of way. For ice to build up on wind turbines particular weather conditions are required, that in England occur for less than one day per year. Most turbines are fitted with vibration sensors which can detect any imbalance which might be caused by icing of the blades; in which case operation of machines with iced blades could be inhibited.

5.7.20 **TV reception**

PPS22 states that scattering of signal mainly affects domestic TV and radio reception, and the general public may be concerned that a wind farm will interfere with these services. Experience has shown that when this occurs it is of a predictable nature and can generally be alleviated by the installation or modification of a local repeater station or cable connection.

5.7.21 Mitigation measures can include improving the receiving aerial, changing aerial height, replacing the aerial, retuning television receivers or providing the affected households with an alternative source of suitable television signals off-air from a different transmitter. Where there is no alternative off-air service solutions can include provision of satellite or cable services. The potential for disruption to occur may be reduced with the switch to digital but a condition can be included to cover this potential impact.

5.7.22 **Conclusion with respect to residential amenity**

Overall it is concluded that, with appropriate controls in place, there would be no material impacts on residential amenity in relation to visual impact, noise, shadow flicker, TV interference and no risks to public safety. The impacts are not

considered to be so significant that it justifies requiring the full 800m separation distance recommended in the Council's informal guidance.

5.8 Proximity to Roads, Public Rights of Way

- 5.8.1 Access to the site is relatively straightforward given the sites proximity to the motorway and the road network's ability to cope with large vehicles. The components of the turbines will be delivered via the motorway and it is unlikely that any alterations to the highway network will be required to accommodate the large vehicles. Within the service area a new access track will be required to reach the exact position of the turbine. However this along with the scheme as a whole raises no concerns to the local highway authority
- 5.8.2 The Companion Guide of PPS22 states that to achieve maximum safety in relation to proximity to roads it is advisable to have a set-back of at least fall over distance. The proposed turbine has a total height of 86.5 metres and there is a distance of between approximately 420 metres between it and the nearest public road. This therefore complies with government guidance, and is not a concern to the Highways Agency or the Local Highway Authority.
- 5.8.3 Concern has been expressed over the effects of wind turbines on car drivers, who may be distracted by the turbines and the movement of the blades. PPS22 states that drivers are faced with a number of varied and competing distractions during any normal journey, including advertising hoardings, which are deliberately designed to attract attention. At all times drivers are required to take reasonable care to ensure their own and others' safety. Wind turbines should therefore not be treated any differently from other distractions a driver must face and should not be considered particularly hazardous. There are now a large number of wind farms adjoining or close to road networks and there has been no history of accidents at any of them. The Highways Agency who are responsible for the M40 motorway has expressed no concern that the turbines may be a distraction to motorway users.
- 5.8.4 PPS22 sets out that The British Horse Society, following internal consultations, has suggested 200 metre exclusion zones around bridle paths to avoid wind turbines frightening horses. Whilst this could be deemed desirable, it is not a statutory requirement, and some negotiation should be undertaken if it is difficult to achieve this. The closet bridleway runs to the north of the site and at the shortest distance the gap between the turbine and the bridleway is only 76 metres. This does not meet the desirable exclusion zone as suggested by the British Horse Society (BHS) in the companion guide to PPS22 dated 2004. Furthermore the BHS has since published Advisory Statement No.20 'Wind Farms' in which it states its desire to see the minimum distance of three times the total height between the bridleway and turbine. The justification for this change is that when the original distance of 200 metres was suggested the majority of turbines were between 40 and 50 metres in height and there is now a significant increase in the height of modern turbines. The BHS has commented on the application and is not satisfied with the distance between the turbine and the bridleway. Evidence from other wind farm developments suggests that horses are generally not alarmed by wind turbines unless they are both unaccustomed to them and come across them suddenly, for example when emerging from woodland close to the turbines.
- 5.8.5 Whilst there are concerns from the BHS in relation to the proximity of the turbine

to the bridleway it is considered that the presence of an existing bund and established planting shields the turbine and provides significant mitigation allowing the distances to be relaxed. This is a view reached by Oxfordshire Country Council's Field Officer. Despite this opinion the Field Officer still has concerns that the turbine is within fall over distance of the bridleway and the effects of shadow flicker. The issue of shadow flicker has been dealt with in section 5.7.13 and PPS22 sets out that whilst fall over distance is a desirable separation distance the minimum acceptable separation distance between turbines and public rights of way is the over-sail length of the blades. This guidance is therefore complied with in this respect. The closest public footpath is approx 330m away from the proposed turbine therefore not a concern in relation to safety.

5.9 Impact on protected species

5.9.1 The site is part of a UK Biodiversity Action Plan (BAP) Habitat. A Phase 1 habitat survey was undertaken as well as surveys for bats, dormice, birds and reptiles.

5.9.2 In light of her own concerns and some concerns from Natural England and BBOWT, the Council's Ecologist has sought further information from the applicant and is generally satisfied that there won't be any significant adverse impact on protected species or habitats but has suggested that pre-works checks are carried out to ensure the circumstances of the site haven't not altered significantly in the time that lapses between determination of the application and the commencement of development.

5.9.3 Surveys carried out in relation to bats revealed that the majority of bat activity occurred along the wooded areas to the east of the site rather than the woodland edge to the north which is closer to the proposed turbine. The 5m length of hedgerow proposed for removal is not considered suitable to accommodate bats therefore the risks to bats from the removal of vegetation in minimal. Risks to bats can vary depending on their species. For example noctule bats, one of the species found on site, are known to fly at a greater height than other species. Therefore they are more likely to collide with rotating turbine blades in comparison with pipistrelle bats, also found on this site, which are more likely to fly at 10-20 metres above ground level. Species of bats that are considered to be at a lower risk are those that appear in higher numbers on the site whilst those at high risk are found in very small numbers. It is concluded that the impacts on bats is not considered to be significant as the movement of bats on site appeared to be along the plantation routes. However collision cannot be ruled out and the applicants propose to monitor bat activity on the site and install further bat boxes to help retain and manage habitats.

5.9.4 It is considered that there will be no significant effects on ecology during construction, operation or decommissioning of the turbines.

5.9.5 **Ornithology**

The Companion Guide to PPS22 suggests that apart from the movement of the blades, the development of wind turbines warrants no different approach in terms of ecological consideration from any other development. Evidence suggests that the risk of collision between moving turbine blades and birds is minimal both for migrating birds and for local habitats. Bird strike is most likely to occur if a wind turbine is erected directly in a migration path, or where there are high

concentrations of particular species. Most birds in flight can be expected to take action to avoid obstacles.

- 5.9.6 47 species of birds were recorded at the site and the immediate adjacent area, 21 of which are confirmed as breeders. The birds recorded as using the site were categorised into their respective nature conservation values. The main potential effects on these birds were considered to be habitat loss, disturbance and collision. There may be some temporary displacement as a result of noise and visual disturbance during the construction phase and the loss of 5 metres of hedgerow is fairly minimal when compared with the other opportunities for bird habitats. Displacement may occur during the operation of the turbine as a result of vibration but in most instances it is expected that the birds would and could re-establish themselves in the nearby wooded areas. As with the bats most of the bird movements appeared along the existing vegetation routes as well as being at a height lower than the proposed blade height, making risk of collision minimal.
- 5.9.7 Buzzards have been recorded in the vicinity but not directly over the application site. The potential impact has been assessed in the submission and the risks to them are not thought to be significant.
- 5.9.8 The local ornithological society confirmed that the area was not within an area of particular ornithological interest and raised no objections. The applicant is intending to include mitigation measures to improve the habitats of various bird species.
- 5.10 Impact on aviation and communications and utilities
- 5.10.1 In relation to aviation issues the Ministry of Defence have raised no objections. However the need for aviation lighting has been stated. This can be included as a planning condition. National Air Traffic Services (NATS) have also raised no objections to the proposal. However London Oxford Airport has objected to the proposal on the grounds that the proposal has the potential to interfere with the performance of the radar which they intend to install and have operational by March 2012. The airport is particularly concerned about the proliferation of turbines and the cumulative impact of them on the radar.
- 5.10.2 This same issue occurred during the consideration of the Fewcott wind farm application and was also considered by the Inspector at the Inquiry. To overcome the concern the Inspector imposed the following condition;
- No development shall take place until written confirmation is received by the local planning authority and approved in consultation with London Oxford Airport and the Civil Aviation Authority that radar mitigation measures in accordance with CAP 764 (Policy and Guidance on Wind Turbines) (and any other relevant CAA guidance in force at the time) can be implemented by London Oxford Airport such that radar operation at London Oxford Airport will be safe when the turbines become operational.*
- 5.10.3 Whilst London Oxford Airport and the applicants for the Fewcott wind farm are currently experiencing some difficulty in agreeing the discharge of this condition meetings and negotiations are taking place to get the matter resolved. Assuming the condition can be discharged to the satisfaction of the Council it is considered necessary to include such a condition in the event of an approval for this single turbine scheme.

5.10.4 In relation to communications infrastructure it should be noted that no objections have been received from relevant bodies.

5.10.5 The risk to transmission networks for gas and electricity is minimal.

5.11

5.11.1 Other issues

Hydrology

A Flood Risk Assessment (FRA) has been undertaken by the applicant to meet the requirements of PPS25. The site is located within Flood Zone 3 an area which has a high probability of flooding. The installation of the turbine base will potentially result in the loss of flood storage capacity but this can be compensated for on a level for level basis by excavating the land to the north of the field and removing the material away from the area. A SUDS system is required to compensate for the impermeable nature of the turbine base. The submitted FRA sets out that as well as the level for level compensation other mitigation measures should include the stream crossing being appropriately designed so as to not increase the effects of flooding, a permeable surface being used for the access road and working platform, a SUDs system being designed and used to accommodate runoff from the turbine base and as far as possible construction of roads and working platforms taking place at existing ground level.

5.11.2 The EA have not commented in detail on the proposal and as such it is assumed that they have no principle objection to the proposal. Furthermore the proposal includes mitigation measures which appear appropriate and can be conditioned.

5.12 Conclusions

5.12.1 Addressing climate change is the Government's principal concern for sustainable development. PPS1, the Climate Change Supplement to PPS1, PPS22 and the PPS22 Companion Guide all promote the development and use of renewable energy and therefore afford a high level of policy support to the proposal.

5.12.2 The proposal will result in generating enough electricity to make the service area carbon neutral in terms of electricity consumption. Whilst this may seem a small contribution it is still a material consideration which carries significant weight.

5.12.3 As is the case with many wind turbine proposals, the benefits must be weighed against localised adverse impacts. The PPS22 Companion Guide identifies a number of planning issues which may be associated with wind energy, notwithstanding the fact that these will vary from scheme to scheme.

5.12.4 In the case of this development the key material considerations relate to impacts on landscape character and the visual amenity of those living and working in the area and using it for outdoor recreation and setting issues in relation to the nearby conservation areas, listed building and Registered Parks.

5.12.5 Local concerns have not been as apparent for this case as they were in relation to the Fewcott Wind farm proposal but concerns are still raised. Concerns relate to visual impacts, loss of amenity due to noise and shadow flicker, impact on views and the character of the landscape. However, officers are satisfied that any amenity issues with the exception of landscape impact would be manageable via appropriate planning conditions.

- 5.12.6 Having considered the information submitted with the application, it is concluded that the wind farm could operate effectively whilst achieving limits for noise emissions based on guidelines set out in ETSU-R-97 (The assessment and rating of noise from wind farms), which could be secured by condition, to ensure residential amenity is maintained during the day and night.
- 5.12.7 Users of the bridleway in the early morning have the potential to be effected by shadow flicker. It is concluded that this potential impact could be adequately controlled through an appropriate condition. Similar conditions have been successfully applied by other councils and should be acceptable to the operator given the fact that shadow flicker only occurs for a limited period when certain climate conditions are in play, and would therefore not affect the overall viability of the wind turbine.
- 5.12.8 In terms of safety, PPS22 clearly states that experience indicates that properly designed and maintained wind turbines are a safe technology. Given separation distances between turbines and the closest residences and rights of way, it is concluded that there is no material risk to health and safety.
- 5.12.9 Therefore it is considered that amenity issues do not constitute sufficient reasons to refuse permission and the proposal is in line with guidance set out in PPS22 and the Development Plan as far as these issues are concerned.
- 5.12.10 The site supports a range of habitats and species, some of which are protected by legislation. Officers are satisfied, on the advice of the Council's own Ecologist that the applicant has adequately assessed the impacts of the wind turbine on these species and that, with appropriate mitigation, the wind farm will not prejudice the legal protection of these species.
- 5.12.11 Therefore the key issue on which a decision must turn is whether adverse impacts on landscape character, visual amenity and the setting of the Conservation Areas and heritage assets are sufficient to outweigh the need for the scheme in terms of renewable energy generation.
- 5.12.12 It is acknowledged that there will be some significant landscape and visual impacts, albeit limited to a fairly small area around the proposal site. Significant landscape impacts will be confined to Farmland Plateau landscape type, within which the development will be located. No significant impacts are predicted for any nationally important AONB's. Significant visual impacts will be restricted to nearby local residents, recreational users of local footpaths and bridleways and motorists. The turbines will appear in views from small number of local residential properties. However, it is concluded that the need for the development of renewable energy outweighs the local negative landscape and visual impacts.
- 5.12.13 Based on these conclusions it is recommended that the application should be approved.

6. Recommendation	
	<p>Approval subject to;</p> <p>i) Officer's being satisfied, following further discussions, that the condition relating to aviation and radar impact is appropriate</p>

	ii) The following conditions
1	The development hereby permitted shall begin not later than three years from the date of this decision. (RC2)
2	Written confirmation of the date on which the development first provided electricity shall be given to the local planning authority within one month of that event. The development hereby permitted shall be removed on or before the twenty fifth anniversary of the date on which the development first provided electricity, and the land restored to its former condition in accordance with a restoration scheme submitted not later than the twenty fourth such anniversary to and approved in writing by the local planning authority. The restoration scheme shall include, among other things, a timescale for the restoration of the site after the removal of the development, a description of the measures to be taken in the demolition and removal of the development hereby permitted and of the measures to be taken to ensure that contemporary standards of pollution control and protection of public and neighbouring interests will be met. (Reason: To ensure that the site is restored to its current state at the end of the 25 year period.)
3	No development shall take place until details of the external colours and finishes of the development hereby approved have been submitted to and approved in writing by the local planning authority. Thereafter the development shall be carried out as approved and the agreed colours and finishes shall not be changed without the prior written consent of the local planning authority. (RC4A)
4	<p>The development hereby permitted shall be carried out in accordance with the following approved plans:</p> <ul style="list-style-type: none"> i. Drawing No. CHMSA150311-1 dated 15/03/11 ii. Drawing No. CHMSA150311-2 dated 15/03/11 iii. Drawing No. 60mHM – KW1, 60m HiMast Class 1 Received 7 June 2011 iv. Drawing No. 07/446-E01 dated 09.11.2007 Received 7 June 2011 v. Additional Planning Information document dated March 2011 <p>(Reason: For the avoidance of doubt, to ensure that the development is carried out only as approved by the Local planning Authority and to comply with Policy BE1 of the South East Plan.)</p>
5	No development shall take place until a construction method statement has been submitted to and approved by the local planning authority, including measures to secure: i) The monitoring and control of noise, vibration and dust caused by construction activity on the site; ii) Control of pollution or sedimentation and responding to any spillages or contamination during the construction phase, including among other things oil interceptors to serve vehicle parking and hardstanding areas; iii) Details of wheel washing equipment to ensure that no material is deposited on the nearby roads from vehicles travelling from the site; iv) The use of impervious bases and impervious bund walls to areas used for the storage of oils, fuels or chemicals on the site; v) Removal of the construction compound and all temporary buildings and the reinstatement of the whole site not subject to built development all within 6 months of the date on which the development first provided electricity; vi) The use of only approved routes to and from the site by traffic associated with the construction

	<p>of the development hereby approved, or its decommissioning, and arrangements for parking and access at the site and for the storage of plant and materials there; vii) That no construction machinery shall be operated on the site, no process carried out on the site other than between 08:00 and 13:00 on Saturdays or between 07:30 and 18:00 on Mondays to Fridays unless previously approved in writing by the local planning authority, with no deliveries on Sundays or on Bank or other public Holidays; viii) Arrangements for outdoor artificial lighting (if necessary) so as to prevent nuisance to surrounding properties. Development shall be carried out in accordance with the approved construction method statement. (RC84)</p>
6	<p>No development shall take place until a shadow flicker mitigation scheme has been approved in writing by the local planning authority. The development shall be operated in accordance with the approved mitigation scheme. (Reason: In the interests of the safety of those utilising the public rights of way within the vicinity of the site.)</p>
7	<p>No development shall take place until a baseline television reception study has been carried out in an area previously approved in writing by the local planning authority, and the results submitted to the local planning authority. Details of works necessary to mitigate any adverse effects to domestic television signals caused in the survey area by the development shall, if approved in writing by the local planning authority, be implemented before the turbine blades are first fitted. A scheme for subsequent reactive mitigation in response to independently validated claims that television reception is impaired by the development, shall be submitted for approval by the local planning authority. The turbine shall not be brought into use until the reactive mitigation scheme has been approved, and the approved scheme shall be implemented for the life of the development. (Reason: In the interests of the residential amenities of nearby properties.)</p>
8	<p>Written confirmation of the submission of the following details to the Ministry of Defence and the Civil Aviation Authority shall be provided to the local planning authority within 3 months of the date of this permission and there shall be no development until such confirmation has been given:</p> <ul style="list-style-type: none"> i) Proposed date of commencement of the development; and, ii) The maximum extension height of any construction equipment to be on the site. <p>Written confirmation of the submission of the following details to the Ministry of Defence and the Civil Aviation Authority shall be provided to the local planning authority within 14 days of the completion of construction of the turbine:</p> <ul style="list-style-type: none"> a) Date of completion of construction; b) The height above ground level of the highest part of the built development (anemometry mast or turbine rotor tip); c) The latitude and longitude of the highest part of the built development; and, d) The lighting details of the site. <p>(Reason: In the interest of aviation safety during the construction phase and throughout the operation of the turbine.)</p>
9	<p>If the wind turbine hereby approved fails to provide electricity for a continuous period of 9 months then a scheme for the decommissioning and removal of the turbine and any other ancillary equipment and structures relating solely to that turbine shall be</p>

	submitted within 2 months to the local planning authority for their written approval. If the turbine remains failed at the end of a continuous 12_month period (including the initial 9 months previously mentioned) then it shall be removed in accordance with the approved decommissioning scheme. The decommissioning scheme shall set the timescale for removal. (Reason: In the interest of maintaining the balance between the benefits of the proposal and potential harm caused by inoperative turbines and to protect the visual amenities of the area.)
10	That prior to the commencement of development pre-works checks must be carried out in relation to badgers and water voles and that in the event of circumstances having changed since the initial Phase 1 Habitat survey was carried out in April 2009 further mitigation and method statements will be required. The results of the pre-works checks and if necessary the mitigation measures and method statements shall be submitted to and approved in writing by the Local Planning Authority prior to the commencement of development. (RC86A)
11	SC 9.4A Carry out mitigation in ecological reports (RC85A) Recommendations of the Dormouse Report by Baker Shepherd Gillespie dated January 2010 and the recommendation of the Ornithology Report by Baker Shepherd Gillespie dated January 2010 and the recommendations set out in the applicants email dated 21 June 2011 relating to reptiles
12	No development shall take place until an ecological method statement has been approved in writing by the local planning authority. The ecological method statement shall include arrangements for the following: i) The provision of an Ecological Clerk of Works; ii) Details of and siting for bat roosts and bird nest boxes, including the timing of their provision; iii) The execution of the works generally relating to those measures set out in the ecological reports provided with the application. The development shall be carried out and operated in accordance with the approved ecological method statement. (RC86A)
13	No development shall take place until a scheme to dispose of foul and surface water has been approved in writing by the local planning authority. The surface water drainage scheme shall be based on sustainable drainage principles and shall include an assessment of the hydrological and hydro geological context of the development. The surface water drainage system shall contain the 1 in 100 year storm event with suitable allowance for climate change. The scheme shall also contain details of the changes to the ground levels, surface details of the access road and working platform and SUDS system. The approved scheme shall be implemented before the development is brought into use. (RC88A)
14	All cabling on the site to and from the wind turbine shall be underground. (Reason: To safeguard the visual amenity of the surrounding landscape.)
15	The turbine shall have an installed generating capacity of at least 0.8 megawatts. (Reason: To ensure the envisaged generating capacity is provided.)
16	No wind turbine shall be operated on the site until a scheme has been submitted to and agreed with the Local Planning Authority for monitoring noise levels at up to five selected residential locations (or at representative locations close to those properties, to be agreed with the Local Planning Authority) during six months following connection to the electricity grid and full operation of all the turbines on the site. The duration of such monitoring shall be sufficient to provide comprehensive information on noise levels at a representative range of wind speeds and wind directions with all wind turbines operating. Monitoring shall be carried out in accordance with the

	approved monitoring scheme and the results provided to the local planning authority within four months of completion of the scheme. (RC53AA)
17	No development shall take place until there has been approved by the local planning authority details of a nominated representative for the development and their contact arrangements to act as a point of contact for the public available by convenient means on at least six days each week together with the arrangements for notifying and approving any subsequent change in the nominated representative. The approved representative shall work within the approved details and shall have responsibility for liaison with the local planning authority in dealing with any noise complaints arising from the development during the period from start of work to completion of final site restoration. In the event that the local planning authority has given written notice to the wind farm operator three times in any 12-month period that it finds the nominated representative to be not working within the approved details, the wind farm operator shall replace the nominated representative, within two weeks of receipt of the third written notice, with an alternative who has been approved by the local planning authority. (Reason: To secure the availability of a point of contact for the public so that, should noise exceed the established limit, there is a clear arrangement to deal with the matter.)
18	No development shall take place until written confirmation has been provided to the local planning authority that a Safety Report has been submitted to and approved in writing by the operators of London Oxford Airport in consultation with the Civil Aviation Authority in relation to the safe operation of London Oxford Airport with the proposed wind farm in place. The turbines shall only be operated in accordance with the terms of the Safety Report. (Reason: To ensure aviation safety)
19	No development shall take place until written confirmation is received by the local planning authority and approved in consultation with London Oxford Airport and the Civil Aviation Authority that radar mitigation measures in accordance with CAP 764 (Policy and Guidance on Wind Turbines) (and any other relevant CAA guidance in force at the time) can be implemented by London Oxford Airport such that a radar operation at London Oxford Airport will be safe when the turbines become operational. (Reason: To ensure aviation safety)
20	The intensity of air navigation warning lights fitted to the turbines and anemometry mast shall not exceed 25 (to be confirmed) candela, except with the written approval of the local planning authority. (Reason: In the interest of residential amenities.)
21	The development hereby approved shall not be brought into use until written notice, signed by a Member of the Institution of Structural Engineers, has been provided to the local planning authority to the following effect: <ul style="list-style-type: none"> i) That the manufacture of the wind turbine conforms to European Standard IEC61 4001; and ii) That the design and installation of the installation as a whole has been carried out in compliance with BS EN 614001:2005 Wind turbines Design requirements. The maintenance operation and removal of the installation as a whole shall comply with BS EN 614001:2005. (Reason: In the interests of public safety)
22	All existing trees, shrubs and other natural features not scheduled for removal shall be fully safeguarded during the course of the site works and building operations (see BS 5837: 2005). No work shall commence on site until all trees, shrubs or features

	to be protected are fenced along a line to be agreed with the Local Planning Authority. Such fencing shall be maintained during the course of the works on site. No unauthorised access or placement of goods, fuels or chemicals, soils or other materials shall take place inside the fenced area. (RC72)
23	Before any works commence on site, details of the design of building foundations and the layout, with positions, dimensions and levels, of service trenches, ditches, drains and other excavation on site, insofar as they may affect trees and hedgerows on or adjoining the site, shall be submitted to and approved by the Local Planning Authority. (RC72)
24	All existing hedgerows shall be retained, unless shown on the approved drawings as being removed. All hedgerows on or immediately adjoining the site shall be protected from damage for the duration of works on the site. This shall be to the satisfaction of the Local Planning Authority in accordance with relevant British Standards (BS 5837: 2005).
<p>Summary of Reasons</p> <p>The proposal accords with national policy for the development of renewable energy. The proposal also accords with provision of the development plan. The landscape impacts are localised in nature and not considered to cause significant harm and this impact is not considered to be sufficient to outweigh the need for renewable energy generation, which is of regional and national importance. There are no other material considerations which justify a refusal of planning permission.</p>	

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