

# **BULLINGTON CROSS WIND FARM**

**AN OBJECTION BY**

**KEEP HAMPSHIRE GREEN**

**Winchester City Council Reference: 13/00800/FUL  
Basingstoke and Deane Borough Council: 13/00046/FUL  
Test Valley Borough Council: 13/00753/FULLN**

**June 2013**

**[pdf 5: Sections 8, 9 & 10]**

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## 8 Aviation

8.1 PPS 22<sup>1</sup> stated clearly that:

*“It is the responsibility of developers to address any potential impacts, taking account of Civil Aviation Authority, Ministry of Defence and Department of Transport guidance in relation to radar and aviation, and the legislative requirements on separation distances, **before planning applications are submitted LPAs should satisfy themselves that such issues have been addressed before considering planning applications.**” (our bold)*

Whilst PPS 22 has been cancelled this principle was carried through in its Companion Guide and it remains a material planning consideration. in this determination. In addition to the above principle, it says<sup>2</sup>:

*“If an objection is raised by either a civil aviation or Defence Estates consultee, **the onus is on the applicant** to prove that the proposal will have no adverse effect on aviation interests.”(our bold)*

8.2 This question was considered at the Linton wind farm Inquiry where the Inspector stated<sup>3</sup>

*The Companion Guide to PPS22 is very clear that it is the responsibility of the applicant to prove that the proposal will have no adverse effect on aviation interests where concerns have been raised.*

8.3 So there is a clear requirement on the applicant to identify and resolve any and all aviation issues prior to the submission of any planning application. The applicant has clearly not complied with this critical requirement and its application is therefore fundamentally defective in respect of this crucial matter. Indeed there is no clarity in the ES about whether there will even be objections from the MOD. The ES states<sup>4</sup> that previous schemes on the same site raised objections from the MOD regarding the radar provision at Middle Wallop and Boscombe Down and indeed this may have been the reason why this scheme did not progress to a planning application. The applicant has been working on this proposal for at least three years and there is absolutely no excuse for not having completed the work necessary to prove that there will be no adverse effect on aviation interests. **Indeed without such reassurance then the three determining councils will have no choice but to refuse this planning application.** If the applicant then undertakes the necessary work they can always submit a further application.

8.4 Air safety is not an issue for which partial or selective evaluation by the applicant or scrutiny by the LPA is acceptable. “Good enough” is not acceptable when public safety is being put at risk. The ES admits that the site is located in an extremely busy aviation area with a high density of both

<sup>1</sup> PPS 22 - Para 25

<sup>2</sup> Companion Guide to PPS 22 - Para 96

<sup>3</sup> APP/W0530/A/09/2108277 - Para 122

<sup>4</sup> ES - Para 13.60/61

military and civilian aviation activity. Therefore, it is even more important for the considerable aviation issues raised to be effectively mitigated ahead of any determination. Any air safety incident involving collision between aircraft and turbines could well have catastrophic consequences and result in substantial loss of life. It is also not an issue that can be resolved with a suspensive or Grampian condition. At the Linton Inquiry mentioned above the Appellant proposed a Grampian condition which the Inspector did not accept saying<sup>5</sup>:

*I consider that it would be unacceptable to introduce the added burden of a wind farm without first being sure that the effects on radar would be properly mitigated... In short I am not satisfied that the proposed development would be capable of implementation without unacceptable harmful effects on the radar coverage for major airports. The appellant has failed to provide the proof required by the Companion Guide to PPS22 that the proposal would have no adverse impact on aviation interests.*

This is precisely the situation that applies to this application where no proof has been provided merely a list of possible mitigating technical solutions a number of which are merely in development.

- 8.5 If real evidence of the life and death importance of completing correct procedures properly in respect of aviation is required, then officers need look no further than the tragic collision of a helicopter with a construction crane over Vauxhall, London on 16 January 2013. This accident involved a highly experienced pilot flying in poor visibility through one of the most stringently controlled airspaces in the UK. Tragically mistakes happen even in the best controlled airspace. This incident demonstrates graphically the vulnerability of low-level aircraft flying in poor visibility through unfamiliar airspace in the proximity of tall structures which may not be easily seen: a precise description of conditions possible at Bullington Cross.
- 8.6 There has been a strong objection to the proposed wind farm from the operators of Popham Airfield who have undertaken a detailed analysis, using their expert skills, of the potential impacts of the turbines on aviation in general in the surrounding area as well as a more detailed look at their own particular circumstances. The full objection is shown In Appendix 3. It is not intended in this objection to repeat the contents of this objection in the interests of brevity and only the key points will be outlined here. We ask that the full objection is read in its entirety to fully understand the detail of the arguments put forward.

### **Policy**

- 8.7 Aviation matters are controlled in the UK by the Civil Air Patrol (CAP) regulations and these have a material bearing on this application:

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<sup>5</sup> Para 139

## ***“CAP 764 Chapter 2 – Impact of Wind Turbines on Aviation***

### *Section 8: Turbulence*

*8.3 It is recognised that aircraft wake vortices can be hazardous to other aircraft, and that wind turbines produce wakes of similar, but not identical, characteristics to aircraft. Published research shows measurements at 16 rotor diameters downstream of the wind turbine indicating that turbulence effects are still noticeable*

*8.7 Until the results of further research is known, analysis of turbulence can only be undertaken on a case-by-case basis, taking into account the proximity of the development and the type of aviation activity conducted. Whilst being a consideration for all aircraft (particularly in critical stages of flight), turbulence is of particular concern to those involved in very light sport aviation such as gliding, parachuting, hang-gliding, paragliding or microlight operations.*

*8.9 Very light aircraft such as gliders, microlights, gyroplanes, hang-gliders, paragliders and paramotors are particularly susceptible to turbulence. In certain circumstances turbulence can lead to loss of control that is impossible to recover from.*

### *Section 10. En-route obstructions*

*10.1 It is possible that an existing or proposed wind turbine development that does not infringe an aerodrome OLS may nevertheless have a potential impact upon local aviation activity. For example, a development beyond an OLS, but only marginally clear (laterally or vertically) of Controlled Airspace (CAS) might be assessed as having a potential adverse impact upon operations within Class G (uncontrolled) airspace due to the potential for the creation of “choke points” where aircraft are forced into a reduced volume of available airspace.”*

### **General Aviation Complexity**

- 8.8 The aviation report included in the ES as Appendix 13.1 accepts that the area in which the wind farm is proposed to be located is “*probably one of the most complex aviation areas in the country*”<sup>6</sup> and “*This is an extremely complex aviation environment*”<sup>7</sup>.
- 8.9 The presence of the Southampton International Airport control zone to the south and the Military Aerodrome Traffic Zones to the west and east, covering Middle Wallop and Boscombe Down to the west and Odiham to the east means that there is a ‘choke point’ exactly at the location of the turbines. There is a high density of both military and civilian air traffic and the aviation map shown in the ES map indicates areas of intense microlight

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<sup>6</sup> ES - Appendix 13.1 - Page 6

<sup>7</sup> Ibid - Page 29

and glider activity. It is difficult to imagine a more constrained area in which to attempt to site one of the largest wind farms in the south of England. To do so without any concrete mitigation of the accepted potential harm is completely unacceptable and in conflict with national policy.

### **Popham Airfield**

- 8.10 Popham Airfield is a busy unlicensed airfield only some 4km from the turbines. As has already been mentioned there is a very strong objection from the owner and operator, Charles Church (Spitfires) Limited.

#### Charity event at Popham Airfield



The Airfield is a valuable resource for the flying and broader community in Hampshire as a safe grass runway airfield for use by all kinds of aircraft including microlights, light aircraft, aerobatic and sport aircraft, gliders, motor gliders, hot air balloons, gyrocopters, helicopters and vintage aircraft. The airfield is the home base for 130 aircraft, whose pilots are also members of the Spitfire Flying Club based there, alongside a professional aircraft maintenance company and the busiest microlight training school in the UK. The owners encourage public access and public participation in events at the airfield, as well as hosting major events to support such charities as the Air Ambulance Trust, the Starlight Children's Foundation and during fly in events several hundred light aircraft movements occur each day.

This is not a farmer's grass strip with limited usage; this is a well-established

and important major unlicensed airfield supporting commercial businesses and a large number of amateur flyers. Any disruption to its operation will have significant adverse socio-economic impacts on an existing business bringing pleasure to many hundreds of people from the immediate locality and much further afield. Its importance is shown in its award in 2000 as “UK Airfield of the Year”

8.11 The objection letter from the owners outlines in detail their well-founded objections which can be summarised as follows:

- The turbines are located directly to the west of the airfield in the direction of the prevailing wind and so for the majority of the time aircraft will take off on Runway 26 departing westwards directly over Bullington Cross. The wind farm will present a major physical obstruction and will require aircraft to divert to the left or right taking them over the more populated areas of adjacent villages which are at present not affected by aircraft noise.

- When the wind is in the east then aircraft will be approaching to land from near Bullington Cross and with a wind farm located there pilots will need to maintain an adequate separation distance which will add an unwelcome complication to flying into the airfield particularly at times of strong winds which could drift them back towards the turbines.

- In Visual Meteorological Conditions with a relatively low cloud base, aircraft will need to fly around the outside of the wind farm at the crucial, high risk time of landing and take-off.

- Increased complexity and potential danger will make the airfield less attractive to learners and inexperienced flyers.

- The airfield needs to make provision for any emergency involving an engine failure immediately after take-off and the fields to the west of the airfield are designated for this purpose. The erection of turbines in these fields will reduce significantly the options open to pilots in these circumstances.

- Shadow flicker will occur when the sun sets in the west directly in the eye line of pilots landing and taking off and climbing away from the airfield, again increasing the potential risk.

- The turbulence from the turbines in the prevailing wind will be blown towards the airfield. Such turbulence is recognised to cause significant problems to light aircraft potentially resulting in a loss of control. There is limited evidence about how far this turbulence will last. Whilst CAP 764 mentions 16 rotor diameters this was based on research from 2003. Research for the wind turbine industry in the UK in 2009 indicated that the turbulence would be detectable 25 rotor diameters downwind, and Australian research published in February 2013 indicated that the turbulence could continue 30-40 rotor diameters downstream of a wind turbine. With a rotor diameter of 92.5m then the outer extremity of this turbulence could be 3.7km downwind

of the turbines and therefore virtually at the end of the runway. With very high usage of Popham Airfield by microlight aircraft and other similarly affected craft then there can be no doubt that significant problems will occur.

- The area where the turbines will be located is already a significant choke point, in an area of heavy air traffic, caused by the presence of controlled airspace to the south, west and east. If the wind farm is permitted a very large volume of light aircraft traffic will be diverted around it or far above it for safety reasons and this will have knock on effects producing potential conflicts with military and passenger-carrying aircraft. The current provision of a Lower Airspace Radar Service to help pilots avoid such conflicts would be seriously impeded by the 'clutter' which the wind farm would introduce onto the screens of the radar at Middle Wallop and Boscombe Down.

8.12 The concluding paragraph of the objection says:

*Whereas the UK Civil Aviation Authority's Directorate of Airspace policy has direct responsibility, along with NATS and the MOD Defence Infrastructure Organisation for the safety of all aircraft using UK airspace, the specific legal responsibility for the safety of the population living on the ground beneath this airspace in Hampshire rests directly with the Local Planning Authorities, and it is a legal requirement for these LPAs to approve only those planning applications which do not adversely impact on public safety. In this letter of objection, we are placing on public record the inherent dangers to life that the Bullington Cross wind farm would introduce to Hampshire, and urge all those with the legal responsibility to determine the related planning application referred to here, to reject them.*

### **Military Aerodromes**

8.13 The proposed site is surrounded by military airfields. RAF Odiham is 23km to the east and Middle Wallop (17km) and Boscombe Down to the west. Whilst the turbines will not be in the line of sight to the radar at Odiham all turbines will be visible to the radar at Middle Wallop and Boscombe Down. A previous scheme on the same site, which was not proceeded with, raised objections from the MOD and the ES admits that there will probably be objections to this scheme as well.

8.14 There is no agreed mitigation with the MOD which has now objected on 12<sup>th</sup> June 2013, not on a single ground but on three. With the length of time that this application has been in preparation, and with the early warning from the previous scheme, there is no reason why, if they can be mitigated, complete agreement has not been reached with the MOD and indeed all the other aviation interests. The objection from the MOD states:

#### *Air Traffic Control (ATC) Radar*

*The turbines will be 19.8km and 31.6km from, detectable by, and will cause unacceptable interference to the ATC radars at Middle Wallop and Boscombe Down respectively.*

*Wind turbines have been shown to have detrimental effects on the performance of MOD ATC and Range Control radars. These effects include the desensitisation of radar in the vicinity of the turbines and the creation of “false” aircraft returns which air traffic controllers must treat as real. The desensitisation of radar could result in aircraft not being detected by the radar and therefore not presented to air traffic controllers. Controllers use the radar to separate and sequence both military and civilian aircraft, and in busy uncontrolled airspace is the only sure way to do this safely. Maintaining situational awareness of all aircraft movements within the airspace is crucial to achieving safe and efficient air traffic service and the integrity of radar data is central to this process. The creation of “false” aircraft displayed on the radar leads to increased workload for both controllers and aircrews, and may have a significant operational impact. Furthermore, real aircraft returns can be obscured by the turbine’s radar returns, making the tracking of conflicting unknown aircraft (the controller’s own traffic) much more difficult.*

#### Precision Approach Radar (PAR)

*The turbines will be 19.8km from, detectable by, and will cause unacceptable interference to the PAR at Middle Wallop. The MOD’s PAR is a very accurate radar used by air traffic controllers to guide aircraft down in inclement weather (although the procedure is practised in all weather conditions). The accuracy and integrity of this radar is critical as air traffic controllers must control the aircraft in descent and very close to the ground. Wind turbines constructed in the line of sight of the PAR can cause localised “track seduction” leading to aircraft disappearing from the radar. A further possible effect is the overload of the radar’s processor, in that wind turbines generate “false plots” which use up processing ability. Once its threshold is reached the radar may be unable to detect smaller targets, which are likely to be aircraft in head-on profile. Technical aspects of the PAR are covered by international arms traffic regulations, and therefore cannot be released by the MOD, but on these grounds the MOD will object to any wind turbine constructed within the PAR’s coverage.*

#### Low Flying

*The turbines will be in low flying area 1 and will unacceptably affect military activities. Low flying areas are tactical training areas made available for military operation low flying training, within which military fast jets and Hercules aircraft may operate to as little as 30m separation from the ground and other obstacles. The proliferation of obstacles within this area is not only a safety hazard but also severely impacts on its utilisation for essential low flying training.*

- 8.15 Until agreement is reached and the MOD withdraw its objection then this application must be refused.

- 8.16 KHG would also request that they are provided with any correspondence with the MOD and other aviation interests related to previous schemes on this site. This will obviously have relevance to the consultation process undertaken by the applicant. If it comes to light that there was clear evidence that there would be an MOD objection then the applicant needs to explain why this was not addressed before an application was submitted or indeed any public notification of the possibility of a wind farm on this site. The planning blight as well as the stress and cost of organising an opposition campaign has placed the surrounding community under massive strain and worry and if it transpires that this was because the applicant ploughed ahead in spite of a clear indication that this was an unsuitable site then answers must be provided.

### **Southampton International Airport**

- 8.17 All that is said in the ES is that one turbine may be visible to the radar here and that the wind farm will be close to the approach and holding areas for planes landing on runway 20. No mitigation is proposed and it is said that discussions will be held with the airport. Again these discussions should have been concluded satisfactorily before the application was submitted.

### **Lasham Airfield**

- 8.18 This is a busy gliding centre 16km east of the wind farm which also has a maintenance facility for large aircraft. Again there is no evidence in the ES that the operators of Lasham have no objection to the proposed planning application or that any concerns have been adequately mitigated.

### **Conclusion**

- 8.19 It is clear in policy that it is the responsibility of the applicant to ensure that any aviation concerns have been addressed satisfactorily prior to submitting a planning application. There is no dispute that the proposed wind farm has been located in one of the most sensitive air traffic locations in the country with heavy commercial and military air traffic and intense use of the area by gliders and a complete range of very light craft. A previous scheme on the same site apparently generated objections from the MOD and was withdrawn.
- 8.20 There is a strong objection from the MOD as well as the well founded existing objection from the owners of Popham Airfield. In these circumstances it is imperative that these issues are mitigated to everyone's satisfaction prior to any determination. This is not a situation where a suspensive or Grampian condition would be suitable.
- 8.21 **Given the lack of any credible, agreed mitigation provided by the applicant, or indeed any apparent attempt to engage in any consultation, the determining authorities have no choice but to refuse this application on grounds of the impact on air safety.** If the applicant

can overcome all problems then they will always be able to submit a further application.

## 9 Traffic and Access

- 9.1 The erection and commissioning of a 14 turbine wind farm is a major construction project lasting twelve months and involving a significant number of abnormal load deliveries and over 10,500 HGV trips. This is even without the additional up to 12,000 trips of the staff working on the site. There can be no question that this level of activity has the potential to cause disruption to local people moving about the area in the course of their daily activity.
- 9.2 The ES in Chapter 12 assesses the likely impacts on traffic and access. Whilst the proposed route up to the turn off the A303 onto the unclassified road appears to be able to accommodate the traffic generated during construction it should be noted that the swept path analysis is carried out as a desk top exercise with no on site verification. The software used offers no warranty as to its accuracy and it would have been sensible to undertake the necessary on the ground validation.
- 9.3 The main area of concern relates to the turn onto the unclassified road which leads to Upper Norton Farm. There are two options at this point. The first turns left onto the unclassified road and the second carries straight on up the bank opposite the junction and then onto a new track turning left. There is no explanation as to why there is not a preferred option identified or indeed why two options were even considered. Either way both routes will need the removal of trees and hedgerows and a land take of 210m<sup>2</sup> as identified in the ES. Winchester City Council needs to confirm that the land take is on land controlled by the landowner and if it is not (Figure 1.1 of the ES appears to show that the land available for development does not include the other side of the bank at the junction) then written approval should be obtained from the relevant landowner.
- 9.4 As the access requires the removal of trees and hedgerow then to conform to EIA requirements an ecological assessment must be carried out on the likely impacts. There is no mention of this area at all in the ecological assessment so such an assessment cannot have been carried out. This is a serious omission as the constructions could have detrimental effects on protected species.
- 9.5 **This application cannot be determined until a full ecological assessment has been carried out on both the optional routes at the turnoff into the unclassified road leading to Upper Norton Farm. There is no other way of accessing the site.**

## 10 Ornithology / Ecology

- 10.1 KHG commissioned the Landscape Partnership to review the ecological acceptability of the proposed Bullington Cross wind farm. This work was carried out by Nicholas Sibbett a senior ecologist with the firm and his report is shown in full in Appendix 4. We would ask that this report is read in full as the following extracts do not purport to be a complete summary.

### Overview

- 10.2 The proposed development is within a wildlife-rich area, with 67 wintering bird species and 67 breeding bird species recorded in surveys, and a high number of rare arable plants. The development covers a large area, so has the potential for significant harm. This potential for harm means that a robust ecology survey is vital to ensure that all potential harmful impacts are adequately assessed. Unfortunately this is not the case here. Surveys for a range of important species are old and/or inadequate, and there is insufficient information for the planning application to be determined.

A High Court judicial review (R v Cornwall County Council ex parte Hardy & Gwennap Parish council CO/4784/99. September 2000) decided that all environmental information should be available in full before permissions could be granted. We argue that in this application this is the position in which the Councils find themselves as many of the ecological surveys were undertaken to a poor standard, and some surveys which would reasonably have been expected to be carried out have been omitted altogether, so that the baseline conditions of the site are inadequately known. The LPAs are, therefore, legally unable to give planning permission according to legal precedent for both EIA and European Protected Species.

The ES assessment methodology claims that minor significant effects are actually not significant, using as a basis for this assertion that ecological features of value at a Parish scale cannot be significantly impacted. It is considered that the ES is deficient in its recognition of impacts on ecological features of Parish value and the application should not be determined until impacts are correctly recognised.

Details of the failed surveys are briefly described below with fuller details in the main report.

### Phase 1 Habitat

- 10.3 The Phase 1 habitat survey failed to search properly for potential reptile habitat and omitted to describe features such as disused pits which may have some ecological value. The habitat survey was, therefore, inadequate and the scale of the survey was too small to show the necessary level of detail. The Desk Study is now out of date and should be repeated before the baseline information is considered complete.

The detailed impact upon field margin habitat is not given, as it is presented

as transitory habitat dependant on field management from year to year. The ES should calculate the length of arable field margin which will be required for construction of tracks and other construction works. With poor survey information there is no logical conclusion to the low assessment provided.

The lengths of field edges surveyed for rare plants only covered a small proportion of the field edges which would be disrupted and the ES omits to consider relevant records, which were obtained from the Hampshire Biodiversity Information Centre, of rare plants in the study area. It is considered that the arable plant survey was inadequate in extent and timing.

The arable rare plant assemblage as described in the ES qualifies for SINC designation and is of County importance, but the ES assesses it as only District value, thus underplaying its importance.

### **Hedgerow**

- 10.4 The hedgerow survey is severely deficient, with the methodology poorly described and hedgerow lengths measured without using the standard methodology, so assertions of ‘importance’ or otherwise have no basis, and there is also a significant amount of data presented for a hedge which largely does not exist.

The impact upon hedgerows is underestimated. The ES claims that the direct loss of 173m of hedgerow is a low magnitude of impact, yet the loss is ‘moderate-scale permanent changes’. The impact on hedgerows is therefore of moderate significance, rather than ‘minor (not significant)’ according to the ES. This assessment is in any case provisional until surveys are properly completed.

As has been covered in the Traffic and Access Section 9 there has been no assessment of the removal of trees and hedges at the turnoff from the A303.

### **Bat Survey**

- 10.5 The bat activity surveys carried out were inadequate in quantity compared to standard practice with recent transect surveys, in only three of the seven months indicated in the guidance, to support the old and out of date 2010 surveys. There was no bat monitoring at height as recommended in the guidance to identify high flying species such as Noctule. Buildings inspections for bats at Upper Norton Farm omitted survey of a single storey brick building with apparent bat roost potential. Trees were classified according to the potential they held for supporting bat roosts but the location of these trees is poorly presented and so cannot be understood relative to turbine locations. Bats are European Protected Species.

Even with an inadequate survey programme eight different species of bats were identified showing the potential for harm.

The impact of floodlighting on bats during construction is very sketchy so

that the impact is hard to identify.

There is also confusion about the impact upon bats resulting from collision / barotrauma with blades. The risk of an incident may be low but the consequence to the population of bats of an individual bat being killed is high. Although the recorded presence of high risk bats in turbine locations was low on a nightly basis, which may be due to a lack of surveying, over the 25 year operational life of the development the risk would be proportionately greater

### **Dormouse**

- 10.6 The dormouse survey (European Protected Species) was inadequate in physical extent, both for nut search and nest tubes and is out of date.

The impact on dormice is restricted to the possibility that dormice might be killed or injured during hedgerow removal. However, the gaps to be created for the development will split the dormouse habitat into isolated fragments which may be too small to support viable populations. This is a major negative impact on dormice which has not been recognised by the ES in the assessment of impacts. A more realistic impact assessment based on current survey information would be a High Magnitude impact on Dormice of County importance rather than the 'low effect' of 'minor (not significant) significance' as presented in the ES.

### **Badger**

- 10.7 Badger survey information has been placed in a confidential annex, so we have been unable to comment in the information.

### **Great Crested Newt (GCN)**

- 10.8 Four ponds were surveyed for suitability for GCN. Two were described as being of 'average' quality for GCN. Natural England advises that full surveys should be carried out for ponds of 'below average' or better suitability yet the ES concluded that a survey was not required against this advice. It is noted that one of the ponds of average suitability for GCN was in Freefolk Wood just 20m from the site. Subsequent investigation by KHG has discovered a further pond, just to the south east corner of Brickkiln Wood, with good suitability on the border of the development site which has not been mentioned in the ES.
- 10.9 The omission of a GCN survey is an unjustified omission within the baseline data and the development may not be properly considered with this absence of data.

### **Reptiles**

- 10.10 Reptiles were scoped out as only one record of a reptile was found within 2km of the site boundary, and because the habitat was thought unsuitable.

However, there is a reasonable likelihood of reptiles being present and affected by the development, and therefore surveys are needed.

### **Birds**

- 10.11 Bird surveys were carried out in winter 2009, 2010 and 2011. The most recent spring surveys are now over two years old, which is beyond the date normally accepted for surveys remaining current. Other surveys are older. It is considered that there may have been considerable changes in the bird populations since the date of the surveys, for example red kite. The baseline is therefore considered out of date and unreliable.

Additional winter walkover surveys in 2012/13 (ES, para 9.46) have not yet been reported and thus cannot be considered by the LPAs.

- 10.12 Stone-curlew survey methodology was not given, so that the robustness of the survey cannot be reviewed. We disagree with the assertion in the ES that describing a survey methodology is likely to cause additional disturbance and egg theft.

- 10.13 The bird surveys are not in accordance with Natural England's guidance for wind farm bird surveys<sup>8</sup>;

- There is no survey of a control area to allow for comparisons during monitoring

- Weather conditions were not reported, so it is unclear if suitable weather was present during monitoring, including some observations during high wind and poor visibility where collision risk is greater

- Vantage Point surveys should cover an area of no more than 1km radius, but the ES surveys covered areas with a radius of nearly 2km so many birds would have been missed due to distance

- Zones of theoretical visibility did not account for woodlands or hedges obstructing surveyor's views, so the area surveyed was much less than that indicated. There was no Vantage Point survey for Turbine 7 north of Freefolk Wood.

- Vantage point surveys of no more than two hours duration are prescribed, yet three hour surveys were carried out which risks observer fatigue and reduction in acuity and thus underestimation of bird movements

**The surveys are therefore not fit for purpose and need to be carried out satisfactorily.**

- 10.14 The proposed mitigation to ensure protection of bird species includes land management, over an unspecified area of arable habitat, so that it is

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<sup>8</sup> Natural England Technical Information Note TIN069

unsuitable over the 25 year life of the development for use by important farmland bird species. This management would have a negative impact for farmland species which is additional to collision risk and disturbance and so requires separate assessment of the impact but the ES fails to do this.

- 10.15 There was no assessment of impacts on bird species identified through the desktop study (as distinct from birds found through survey). There was no assessment of the impact of the wind farm in preventing future expansion of rare and sensitive birds such as red kite and stone curlew; both these species are increasing in the local area yet the increase could well be truncated by the proposed wind farm. Because of the outdated and below standard surveys the impact assessments are not reliable.

### **Mitigation**

- 10.16 The proposed mitigation for both bird and non-bird ecological features is based on inadequate understandings of the distribution and abundance of many of the ecological features present and poor impact assessments. The mitigation cannot be considered adequate and requires complete revision following further surveys and impact assessment.

### **Enhancements**

- 10.17 The proposed enhancements are neither specific, measurable, timetabled, or have a known location and so it is not possible to determine whether these measures are actually of benefit to local wildlife. Enhancements should be considered as part of the planning application process and should not be left to a post-application submission.

### **Monitoring**

- 10.18 Monitoring of the wind farm, should it be consented, is required to identify bird and bat kills and compare these with ES predictions. This can lead to remedial actions where necessary and compliance monitoring during construction and operational phases. A control area needs to be identified and subjected to baseline survey so that any changes on the wind farm site can be compared to a site without a wind farm.

### **Conclusion**

- 10.19 Before the LPAs can determine this application they must require the applicant to carry out new robust surveys for Phase 1 Habitats, hedgerows, bats, dormice, great crested newts, reptiles, birds and rare arable plants. Impact assessments need to be based on these robust surveys and accurate evaluations of importance, and need to include impacts at scales below County level. Mitigation should be realistic, detailed and based on sound impact assessments.