Appeal Decision

Inquiry held on 22 September 2009
Site visit made on 2 October 2009

by Mr D Lavender MRTPI

an Inspector appointed by the Secretary of State for Communities and Local Government

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Decision date:
8 December 2009

Appeal Ref: APP/L2630/A/08/2084443
Land around Busseys Loke, Hempnall, Norwich, Norfolk

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
- The appeal is by Enertrag UK Ltd against the decision of South Norfolk District Council.
- The application Ref 2008/0917/F, dated 17 April 2008, was refused by notice dated 14 August 2008.
- The development proposed is installation of a seven wind turbine wind farm with associated switch house and interconnecting cables.

Decision

I dismiss the appeal

Procedural matters

1. Paragraph 2.4 of the Statement of Common Ground on General Matters (document 4) identifies the plans and other details that form the application before me. It refers, among other things, to an Environmental Statement (ES) dated March 2008.

2. Prior to the Inquiry, the adequacy and content of the ES was questioned and reviewed. In consequence, a Direction was issued by the Secretary of State on 19 February 2009 (amended on 2nd March 2009) under Regulation 19 of the Town and Country Planning (Environmental Impact Assessment (England and Wales) Regulations 1999 requiring further information on the following matters:
   - Archaeological remains within the site.
   - The setting of Scheduled Archaeological Monuments within a 2 km radius of any turbine.
   - The settings of Listed Buildings within 2km radius of any turbine
   - Any potentially significant impact of the proposal on Conservation Areas any part of which fall within a 2 km radius of a proposed turbine.

3. This further information, together with other information in the form of a revised visual and landscape assessment was then provided and subjected to discretionary publicity by the Appellant, in the spirit of Regulation 14 of the 1999 Regulations, before the Inquiry opened. The Environmental Information before me satisfies the requirements of the Regulations and I am content with the consultation and publicity arrangements associated with it, there being nothing that might cause me to take a different view. I have accordingly taken

all of the Environmental Information into account, alongside the original ES, in my consideration of the proposals.

4. The design and access statement accompanying the application refers to a site of 2 km x 1 km and some of the evidence and submissions to the Inquiry suggests that the site is no less extensive than that. However, in answer to my questions, the Appellant advised that the application site boundary was that marked in red on drawing ENUK023/PL/004, effectively covering just the proposed turbine bases and the access tracks themselves. At my request, a further plan was therefore produced showing other land under the ownership or control of the Appellant outlined in blue (document 35). I do not regard this as an additional or revised application plan and take it into account only inasmuch as it informs the suitability, under Circular 11/95, of any planning conditions that might be considered and which could bear upon the blue land. Drawing ENUK023/PL/002 shows the details of a "candidate turbine", which might not necessarily be the actual turbines that could be used. However, the dimensions marked on it for hub height, blade length and blade tip height are all identified as maxima and I was informed that these would not be exceeded. In particular, the maximum height to blade tip would therefore be 125 metres.

5. Although the application is for full planning permission, paragraph 2.6 of the ES affirms that at the end of the expected working life of the wind farm (25 years), the turbines would be decommissioned and the ground surface reinstated to its former condition. This is a further factor that has potential to bear on the formulation of planning conditions.

6. From the evidence and submissions at the Inquiry, the written representations and from my inspection of the site and its surroundings, I consider that the main issues in this case are:

    1. The effect of the proposal on the local landscape.
    2. The effect on the setting of St Margaret's Church in Hempnall and on other cultural heritage assets.
    3. The impact on the living conditions of local residents in terms of turbine noise and visual amenity.
    4. The implications for local bat populations.
    5. The implications for local equestrian interests.

    I deal with each of these subjects in turn before reviewing, in my overall conclusions, the relevant the policy background. Section 38(6) of the Planning and Compulsory Purchase Act 2004 (as amended) requires that applications and appeals be determined in accordance with the statutory development plan unless material considerations indicate otherwise. An understanding of the relevant policies is thus essential to "calibrating" the appropriate balance between the need for renewable energy and protection of local environments, which is the overarching point at issue in this appeal, and leads directly to my decision.

Issue 1: Effect on the local landscape

7. In accordance with advice in PPS7 "Sustainable Development in Rural Areas" (PPS7), the Council's approach to landscape protection in the South Norfolk Local Plan (LP) policy ENV1 is to be based upon formal and robust assessment of the qualities that lend to local landscape character. A suite of character studies covering the whole of the District have been carried out on the Council's behalf by Land Use Consultants (LUC) since 2001, the most recent of which (undertaken between April and September 2005) covers the so-called "rural policy area" in which the appeal site lies. It has not been adopted as Supplementary Planning Guidance because it is now intended to be used to inform policy formulation for a replacement Local Development Framework, but it provides useful descriptive material at a finer level than the national JCAs. Because it was not produced with wind turbines in mind, it can be regarded as neutral in relation to the appeal scheme (submitted after its publication), and its findings are largely undisputed.

8. The study (the "Landscape Assessment") identifies the site as lying within the "Tas Tributary Farmland" character area. The relevant key characteristics of this area are listed as including an open and gently undulating to flat landscape incised by shallow tributary valleys, large open arable fields, small blocks of deciduous woodland of high ecological and visual quality, scattered remnant hedgerow trees, a network of recreational footpaths and a small number of large villages, with smaller hamlets, scattered farmhouses and agricultural buildings. Also of relevance are neighbouring landscape character types from which the turbines would be seen at greater distance. To the north, east and south these include the Tas River Valley character area, which embraces both the wooded fringe to the valley sides and the green and lush pastoral quality of the valley floor, these being features that are recorded as creating a strong contrast with the more intensive arable land use of much of the District. The relative baldness of the Poringland Settled Plateau Farmland characterises the more distant landscape closer to Norwich.

9. In April 2006, a further study was produced for the Council by LUC to provide guidance on the sensitivity of the local landscape to wind turbine development (the Landscape Sensitivity Study). This is intended to cover turbines in the maximum range of 120-150 m in height. It categorises these into 4 groups based on turbine numbers. In essence, in the Tas Tributary Farmland the guidance suggests that groups of 2-3 turbines would be appropriate rather than 2-5, while there would be high sensitivity to groups of 6+. Broadly similar guidance attaches to the Poringland Settled Plateau Farmland, but without subdivision of the 2-5 category. Conversely, the study suggests that the Tas River Valley landscape would have high sensitivity to any form of wind turbine development. This study was criticised by the Appellant Company for failing to take account of the wider landscape impacts of climate change, such as the position statement of the Landscape Institute and the Countryside Agency Topic Paper 9, but those do not evaluate environmental impacts local to the District. I also note the Appellant's concern that, if applied too unswervingly, the Sensitivity Study could be used to exclude developments of more than 6 turbines from some 90% of the District. However, the study advises that where (as here) the numbers fall on the threshold between groups, the guidance for both the higher and lower group size should be

considered. As such, I regard the study as merely indicative of relative sensitivities across the District, and not prescriptive as to actual turbine numbers.

10. In June 2009 the Council adopted and published a guidance note on Assessing the Landscape and Visual Impact of Large Wind Turbine Developments to explain how the Landscape Assessment and the Sensitivity Study would be used together when assessing the potential landscape and visual impact of large wind turbine proposals. The Appellant had commented on the guidance note when consulted (with only some of its concerns resulting in changes). The Council advised that a main consideration in producing the document had been to influence site selection choices made by wind energy developers by providing a positive steer towards the least sensitive landscapes (in other parts of the District), without altogether precluding groups of the size proposed anywhere that the environmental, economic and social impacts could be satisfactorily addressed. Nonetheless, despite having been the subject of publicity and consultation, and deriving from "parent policies" in the Local Plan (UTL13 and ENV1), the Council stated that it does not yet seek to promote the guidance note as either SPG or SPD. I therefore place no reliance on it in my approach to evaluation.

11. Nor, however, do I support the Appellant's contention that there would be no greater or less impact on the Tas Tributary Farmland landscape from a single group of 7 wind turbines than from several smaller groups of similarly sized turbines. The Sensitivity Study provides cogent reasons based on the analysis of a wide range of local landscape characteristics as to why there should be fewer and more thinly distributed turbines in this part of the District than in other parts. It thus provides both local visual impact and wider distributional reasons for its recommended approach, which disregard for individual wind farm size would fail to recognise.

12. Indeed, from my inspection of the site and its surroundings, it is clear to me that the landscape in this part of the District, in which the proposed turbines would be seen within and across a diverse landscape (within the Tas Tributary Farmland, but also more widely), is neither bland nor lacking interest as the Appellant claims. It certainly lacks the ruggedness and drama of some parts of England, but it is nonetheless a landscape in which man's influence is everywhere apparent (both in villages and field patterns), lending an inherently attractive "human" scale and quality to the environment. The appeal site itself, for example, amounts to little more than strips of land forming parts of larger arable fields some of which are bordered only with low and patchy remnants of hedgerows. However, at the centre of the proposed turbine fields is a sizeable block of ancient woodland (Little Wood). This forms not only the present focus of views across the turbine fields but also represents the hub of a network of tall and solid hedgerows distributed more widely around it. Especially to the north and east these hedgerows often line both sides of deep ditches with overarching trees and connect to other similar blocks of woodland. The effect is to not only lend enclosure to the outlook towards the horizon but also to create considerable diversity of views often within very short distances of each other. These range from relatively unobstructed panoramas of "big Norfolk skies", to more intimate sylvan glimpses of the immediate environs including, for example, scarecrows guarding a winter field of winter barley, a

church tower nestling among trees, or the edge of a small settlement. Occasional exposure of some turbines could, I accept, be absorbed into the most open views and could be said to add either contrast with, or further variety to, others. However, in this case, the proposed turbines would spread over an area of some 2km by 1 km and, in such number as proposed, would be seen in front of, behind and to either side of Little Wood from almost every direction, as well as impinging into almost every more intimate view of the local landscape across the turbine fields.

13. Impact on the Tas River Valley Landscape would, from what I saw at my site inspection, be much more limited, both because of increased distance and contours, there being no suggestion that the turbines would be conspicuous from the valley floor other than in the vicinity of the water meadows close to Hempnall. Views of and from the valley sides, notably in and around Shotesham for example, effectively pass over the valleys themselves before melding into the closer views from the Tributary Farmland. For the most part, all or parts of turbines would be seen on the skyline above or among trees. While the silhouette would extend a good way along the horizon, it would represent only a small part of the total arc of view from the higher land and the presence of a single group of turbines even of the size proposed would, I consider, thus on balance be acceptable here. I am also content that there would be no serious impact on the landscape when viewed from the Poringland Settled Plateau Farmland. Nonetheless, I share the judgement of the authors of the sensitivity study that turbines in the number and extent proposed in this case would not be comfortably absorbed into the Tas Tributary Farmland landscape.

Issue 2: The effect on the setting of cultural heritage assets.

14. It is common ground between the Council and the Appellant that consideration of this issue should focus on St Margaret's Church, Conservation Areas and Listed Buildings within 2 km of the appeal site and specified others beyond 2 km. There are 53 Listed Buildings (one Grade I, one Grade II* and 51 Grade II) and two Conservation Areas within 2km of any turbine. No scheduled ancient monuments or registered parks and gardens have been identified within this 2km radius (document 3). There is no suggestion that any asset would be physically affected by the proposed turbines, and argument focuses only on settings and, additionally in the case of Conservation Areas, views in and out.

15. The Appellant indicated that my approach to the subject of setting should be firstly to assess the significance of the cultural heritage asset under consideration, then to define its setting, identify any effect the proposed development might have on the setting and, lastly, determine whether that effect "mattered". My reasoning broadly follows that approach. However, I do not seek to analyse the relative significance of assets in any greater depth than is apparent from the categorisation of Listed Buildings into three broad grades and the differential statutory and policy regimes that variously apply to settings of Listed Buildings and the settings (and views into and out of) of Conservation Areas. I find no statutory or other basis for doing otherwise.

16. The subject of setting was also debated at some length during the Inquiry, in the light of extant and emerging advice on the subject (documents 7, 36, 37

and 39) and the Further Environmental Information. Having considered the submissions, I see little purpose in engaging in philosophical discussion over whether the setting might extend near or far, or may be regarded as fixed or variable, or whether the separate concept of context is wider or narrower than setting. Rather, I adopt a more pragmatic approach, which begins with consideration of factors that lend particularly (whether now or in the past) to an appreciation of the architectural and historic qualities of the asset including the reasons for designation (relying mainly on paragraphs 3.5 and 4.2-4.5 of PPG15), and the extent to which those factors manifest themselves or are complemented by important visual or physical relationships to the surroundings. I also take account of the extent to which development within the setting of a Listed Building might be disruptive to its use, such use often being of importance to the ongoing preservation and enhancement of the building itself. In my analysis, setting may thus extend as near or as far as proposed development would encroach into any of those relationships, and may thus vary according to the scale and nature of development proposed as much as it might with regard to the inherent characteristics of the asset itself. In the case of Conservation Areas, my consideration is assisted by the detailed draft Conservation Area appraisals that the Council has produced in accordance with PPG15 advice. It follows that my judgement as to whether an effect on setting (or on Conservation Area views) "matters" flows from consideration of the desirability of preserving or enhancing in line with the relevant statutory or policy requirements. I leave "calibration" of that against the desirability of exploiting sources of renewable energy to my overall conclusions.

St Margaret's Church Hempnall

17. The Church is Listed Grade I and I thus place it in the highest category of significance. It has a square early fourteenth century tower at its western end, which includes a belfry and an embattled parapet. The church occupies a prominent focal point within the village, standing on the crown of a bend where it dominates views along the The Street from the west and south. The tower is the tallest feature both within the village and in the countryside for some distance around, as it no doubt has been since construction. Its shape and location are, I am told, unusual in this part of the countryside which has a high proportion of round-towered churches and where many churches are sited well away from the villages that they serve. As a village church (rather than as a town or city church) important features of its setting thus in my estimation include: its visual eminence in views from The Street as seen in the context of the scale and appearance of other development within the village including The Longhouse (Grade II Listed); the outward and upward glimpses of sky and trees seen from The Street through the gaps to either side of the Church (which transmit open and verdant pastoral qualities into the heart of the settlement, including to the surrounds of the Church); the rurality of its graveyard; and, more widely, the shape and dominance of the tower against the silhouette of the village when seen in the approaches from the surrounding countryside.

18. From within the village, the nearest proposed turbine would stand about 1km from the Church, and it is apparent from the photographic material available to me, and from my site inspection, that the combined effects of distance and perspective would maintain the visual eminence of the Church (as the tallest

feature) in views along and across The Street. I also observed that there would be no significant view of the proposed turbines from within the Church itself such that the functioning of the Church would be impaired. The proposed turbines would, however, encroach into the open glimpses of sky to either side of the Church and especially so from the main entrance path adjacent to The Longhouse. Those views at present encompass two of the most attractive elevations of the Church and its detailing, including the tower, together with tombstones among grass and trees, and little else. These gaps are at present entirely free from the intrusion of modern built development and the distraction of moving objects. The presence of turbines here would, I consider, introduce an incongruous feature which would filter views of the sky between some of the upstanding turbine towers and of the rotating blades. To that extent, I consider that they would diminish openness and rurality, leading me to the conclusion that the setting of the Church within the village would not be preserved. I come to a different opinion with regard to the rurality of the main part of the graveyard further to the east and north because that, in itself, forms a part of the setting of the Church, the relationship between graveyard and countryside is best appreciated in a visual sense when facing away from the Church or in an historic sense (of the relationship between graveyard and church) when facing away from the proposed turbines. The presence of all seven turbines in the main outward view from the second graveyard extension (the one in most current use) may be found by some, especially those seeking solace in quiet contemplation after bereavement, to be unduly disturbing. I have some sympathy with that view, but with the nearest turbine at some 0.9 km distance and the others progressively further away, I do not consider their impact to be so unavoidably pervasive as to warrant a finding that the proposal would be unacceptable for that reason alone.

19. Moreover, when viewing the church in its rural setting, from outside the village, I found the church tower not to be a particularly prominent feature in approaches from the south and west, where it is seldom seen above the surrounding tree canopy. It is much more conspicuous from the west and north west in the approaches along Woodton Road and Busseys Loke where (in historic and present-day senses) it both signals the presence of the village and is a defining feature of the village silhouette. The proposed turbines would intervene in (but not completely mask) those views from a distance, but would not interrupt the same views from closer to, once the turbines have been passed at about the 1 km distance. It is a fine point as to whether it could thus be said that the setting would be preserved, or whether just sufficient of the setting would be preserved to enable the visual eminence of the church still to be appreciated. To my mind, it is the latter and that it is the desirability of preservation in its entirety that falls to be considered, but it is both the former and the latter that fall to be weighed in the balance with the desirability of producing energy from renewable resources. I return to that balance in my overall conclusions and record here only my finding that the setting of the Church, in the ways that I have defined it, would neither be preserved nor enhanced.

Hempnall Conservation Area

20. Because the Church is a defining feature of a relatively small Conservation Area in terms of both setting and views into and out of it, my findings on the setting

of the Church also transfer also to the Conservation Area. I do not, however, extend those findings much more widely. This is because although there may be many views from within and outside the Conservation Area where turbines would be seen, these are not in my estimation "character-defining" views or essential to an appreciation of the setting of the Conservation Area as a whole. In many places within the village, the prevalence of buildings, trees and hedgerows would, despite their much lesser stature than the proposed turbines, provide full and effective screening because of their greater proximity to the viewer. In the hedgerow gap along The Street, where the new school entrance is being constructed, for example, the turbines would be seen with the sides of a former quarry, the school playing field and a modern school building in the foreground. From the several well used tracks crossing the water meadows to the south of The Street, one or more turbines would be visible rising well above the roof lines of some of the village houses. Although a few of those houses are Listed Buildings, under my definition (deriving from the reasons for them being Listed or included within the Conservation Area) I consider that their settings relate mainly to their contribution to the character of development along the Street itself to the front, and the rurality lent by the relationship to the water meadows to the rear, rather than to the wider landscape beyond. Neither the settings of those buildings, nor views of them into or out of the Conservation Area would thus be other than preserved. Given that the turbines would, however, by reason of their height and movement intrude into the rural backdrop of the village Conservation Area when seen from the water meadows, it cannot be said that the setting of the Conservation Area (which, as a village, is drawn from visual affinity with the surrounding countryside) would be either unchanged or improved. As with the Church, however, this is a question of degree, because turbines would impinge only upon a segment of a 360° setting, the bulk of which would remain undisturbed. Again, this is a matter that I return to in my reaching my overall conclusions and I record here only my finding that the setting of the Conservation Area would, at least in part, be neither suitably preserved nor enhanced.

Other Listed Buildings

21. Discussion at the Inquiry under this heading focussed mainly upon more distant churches, especially those with the locally distinctive round towers. Their designation as Listed Buildings affirms their national significance, but I could find no evidential substance for claims that they are of international significance. While it was pointed out to me that it is sometimes possible to see two or more churches together (whether round or square towered) variously in line or spread across the landscape, I similarly found no evidence that group value or planned intervisibility had led to such relationships or had been determinative in their listing. It was also put to me that the density of these, other Listed Buildings and historic artefacts in this part of Norfolk warranted recognition as an historic landscape. The fact is, however, that for whatever reason the local landscape has not been designated as such and, although the evidence before me portrays a richness of historic artefacts, it also indicates that there are other parts of the Region where such artefacts can be found in similar or greater density. I do not therefore attach "exceptional" quality to the local landscape in that respect.

22. That said, there would be churches from which turbines would be visible, notably at Stoke Holy Cross (Grade II*, 5.1 km), Shotesham (Grade II*, 3.6 km) and Woodton (Grade II*, 2 km). Nonetheless, at the distances concerned, I am satisfied that there would be ample countryside around them for worshippers and other visitors still to be able to fully absorb their "country church" character without turbines intruding. Views from the wider countryside back towards the churches (at Shotesham and Topcroft, for example) may include turbines in a single panorama but, from the positions to which I have been guided, the turbines would not stand directly in front of, or behind the churches concerned but to one side or the other, where the separation distances across the horizon would be sufficient for both to be regarded as separate entities, leaving the churches to be enjoyed in their undisturbed settings.

23. The only exception that I saw would be the ruined church of St Martin's at Shotesham (within the Shotesham Conservation Area), where turbines would be visible almost directly behind the formerly ivy-clad tower from the front of the replacement church (St Mary's). From the high ground of St Mary's, the contours would place the turbines below the height of the St Martin's tower in the foreground and they would fall out of view as the ruined tower is more closely approached. The rurality of both churches would remain all-pervasive and to my mind their setting is defined, in any event, by the visual relationship between them rather than by the distant horizon. I do not therefore regard the setting of either or both of these Listed Buildings to be other than preserved in statutory terms. I acknowledge however that the hilly ground on which they stand is a local amenity feature and that some may find the view of turbines from this eminence to be both incongruous and unattractive from a more general landscape impact perspective. Nevertheless, the Council's draft Conservation Area appraisal does not attach any particular significance to the outlook across the countryside behind the ruined tower, and from what I saw at this location, it seems to me that there would be other more attractive directions of view of the countryside hereabouts, from both the ruined and replacement churches, in which the turbines would either not be prominent or visible.

Other Conservation Areas

24. My attention was drawn specifically to two outlying Conservation Areas, at Saxlingham Green and at Fritton. I found these to have broad similarities inasmuch as both are of profoundly rural character, have secluded sylvan settings, are characterised by relatively thin scatterings of houses around extensive open commons and have remained almost completely free from any trace of incongruous modern development. At Saxlingham Green there would be southward views of some of the turbines at intervals along The Green, mostly near its eastern end, from a distance of about 1.2 km. These views are through gaps in the trees bordering the central common. I see from paragraphs 6.3 and 6.4 of the draft Conservation Area appraisal that it is suggested there would be benefit in closing some of these gaps and reducing the number of overhead wires here while, in later text, reference is made to the superb views opening up to the surrounding countryside to the north. In that context, it seems to me that the sylvan and secluded setting of the Conservation Area might in future be strengthened (which would mask the

turbines as effectively as the existing greenery between the gaps), while the key open views here are in the opposite direction, away from the proposed turbines. As matters currently stand, a view of tall, modern rotating turbines at this end of the village would, in my estimation, neither preserve nor enhance the setting of the Conservation Area, but there is at least some prospect that such a conclusion need not necessarily endure if the Conservation Area Appraisal proposals are put into effect.

25. At Fritton, a defining characteristic of the Conservation Area is, again, the seclusion of the sylvan setting of the village, as referred to in paragraph 3.1 of the Conservation Area appraisal. This seclusion is established primarily by the absence of upstanding features impinging into the sky above the tree line girdling the common. There is every prospect that at least the rotor of one turbine would appear in the northward view from parts of the common, rising just above the tree line. This would be at some 3 km distance and visible in only a small arc of the total 360° view available from the common. While the degree of visual intrusion would be small and pervasive only in one direction, the proposed turbine would, in juxtaposition with such an historically intact settlement, represent an incongruous modern, moving structure. Its presence would not, in my estimation, serve to either preserve or enhance what I regard as an integral part of the key generic outward view (of nothing but sky above the trees) from the heart of the Conservation Area.

Issue3: Impact on the living conditions of local residents

(a) Turbine noise

26. Paragraph 22 of PPS22 affirms that ETSU-R-97 should be used to assess and rate noise from wind energy development. The introduction on page 83 (together with subsequent more detailed advice in Section 7) refers to the processes to be followed before permission is granted and to ensure that suitable amenity safeguards are put in place. In effect, it promotes a four stage process:

- The first stage is to measure prevailing background noise levels;
- The second is to use those measurements to generate maximum permissible day-and night-time noise levels;
- The third is to predict the likely noise "immissions"[1] from the turbines in order to confirm that they can be operated within the permissible noise levels;
- The fourth is to draft planning conditions (albeit ETSU-R-97 actually advocates a planning Obligation) that provide for enforcement action to be taken if the permissible noise levels are breached.

27. Although the Council is content with the Appellant Company's process and outcomes in these respects, SHOWT is not and raises in addition concerns that not all turbine noise is suitably covered by ETSU-R-97. I accordingly deal with the main points of the criticisms on each these matters sequentially.

[1] Incoming noise measured at the receptor, rather than emitted at the turbine.

Background noise levels

28. Existing background noise levels were measured at 5 nearby properties (Thetford Farmhouse, Dawson's Farm, Road Green House, a holiday home site known as "private meadow", and 21 Old Market Way. These locations were agreed with the Council on the basis that they are the most sensitive, or would be representative of prevailing background noise conditions at other dwellings surrounding the wind farm. I note that the Council did not, however, apparently engage with the selection of monitoring points at the dwellings themselves and that two of the closest properties to proposed turbines (Meadow View and Lyncroft on Bungay Road) were not selected for measurement at all. Agreement on precise measuring points is, in my view, desirable in order to avoid any suspicion (unfounded or otherwise) that locations have been selected unilaterally to identify existing relatively noisy locations to benefit wind farm developers. Nevertheless, ETSU-R-97 requires no more than that the measurements be agreed with the Council's Environmental Health Officer (pages 59 and 83). Moreover, both Meadow View and Lyncroft have Bungay Road directly to the front and a working farmyard directly to the rear, so I am content that the proposed use of the measurements for the "private meadow" (which is more isolated from such existing noise sources and thus inherently quieter) would not be prejudicial to the occupiers of those two dwellings. My site inspection (visual and aural) also left me content that the general distribution of the other measurement locations and their prevailing noise environments were broadly representative of a selection of suitably quiet local rural locations.

29. The measurements were further criticised by SHOWT on the basis of two shortcomings acknowledged by the Appellant Company's acoustician. The first of these shortcomings was the absence of rainfall measurements at the respective sites and the second was incorrect recording of time by the wind speed data logger (both as a result of malfunctions). The sound of heavy rain can raise background noise measurements and thus needs to be excluded, while accurate recording of time is necessary to identify the correlation between wind speed and measured noise. In the event, records of satellite imaging were consulted in order to identify rainfall patterns during the period of the noise survey and a 30 minute adjustment (derived from the time slip on the wind speed logger at the end of the survey relative to the clock on the sound meter) was made to the timings used. It was put to me that all of these factors have potential to distort outcomes (because satellite imaging is inherently compromised by cloud cover and by not being sufficiently locationally specific, with the inaccuracy of the data logger clock having potentially been variable rather than constant). Further criticisms were made of the standardisation of measurement to 10m height (rather than human ear level) and of the type of microphone windshield used. The 10 m height is, however, set by ETSU-R-97 (pages 85 and 87) and any other pattern of measurement and calculation does not have that, or equivalent, provenance. ETSU-R-97 does not specify any particular type of windshield, and I am not convinced that the type used in this case has such demonstrable shortcomings that I should regard it as unfit for purpose.

30. Those further criticisms aside, measurement of background noise levels is not a precise science because of the range of subjective professional judgements

that have to be made with regard to the equipment used, its operation and positioning, and at data analysis stage. While neither these nor the two acknowledged malfunctions persuade me to the view that the measurements are untypical of quiet rural locations, the uncertainty around their combined effects does not leave me with sufficient confidence to attest that background noise levels have been established to within, say, just one or two decibels of accuracy.

Maximum permissible noise limits

31. For the most part, these noise levels are set simply by adding a tolerance of 5dB(A) to the measured background noise levels. This recognises the need to offer reasonable (but not absolute) protection to both the internal and external environment enjoyed by wind farm neighbours without unduly restricting the development of wind energy and the wider environmental benefits that flow from its exploitation. In particularly quiet areas (and when the masking noise of the wind is also low), however, a fixed noise limit of43dB(A) is applied during night-time hours and a figure between 35-40dB(A) during day-time hours. In effect, both of these fixed night-time and day-time limits, represent the degree of noise exposure that is considered to be acceptable no matter how quiet the existing local environment might be.

32. In selecting the appropriate figure between 35-40dB(A) for the quiet day-time fixed limit, ETSU-R-97 says that four factors should be taken into account. These are the number of dwellings in the neighbourhood, the implications for the amount of electricity that would be generated, the duration and level of exposure and whether any of those affected have a financial involvement with the wind farm. I discount the last, because there is no suggestion of financial involvement among the householders concerned.

33. It is proposed by the Appellant Company that the appropriate figure for the quiet day-time noise limit be 40dB(A), a figure agreed to by the Council. This would be applied to all of the five "measured" properties and, as appropriate surrogates, to a further 16 locations broadly scattered around the wind farm site. Notably, this does not mean that only 21 properties (5+16) would have 40dB as their lower limit, because most of the 21 locations are in turn to be regarded as representative of others around them. At the two quietest locations, for example (21 Old Market Way and Dawson's Farm), the limit is transferred directly to 14 of the 16 further locations many of which themselves identify with small groups of houses, while 21 Old Market Way is intended to be representative of properties on this edge of Hempnall Village in general. Moreover, at 21 Old Market Way, where actual background noise has been assessed at 27.9dB-32.4dB (L_{A90}) for 3-7 metres per second (m/s) wind speeds, the permissible 40dB turbine immission level would be between 8 and 10 dB higher than background. That would be a plainly audible difference (even though noise levels would still be representative of a relatively quiet rural environment), whereas if the bottom rather than the top of the permissible range (35 dB) was to be chosen instead, the immission increase allowable would reduce to a less perceptible 3-7 dB. Wind speeds of 3-7 m/s represent a significant proportion of the level at which turbines are likely to be operational, and the properties for which 21 Old Market Way (and similarly for Dawson's Farm) acts as a surrogate are distributed widely around all points of the wind rose. It thus seems to me that on the basis of the "number of

dwellings in the neighbourhood" and the potential "duration and level of exposure" a fixed limit of less than 40dB(A) would be justifiable under the ETSU-R-97 criteria, although regard must also be paid to the effect of a lower limit upon electricity generation (which in some measure depends upon turbine noise predictions).

Turbine noise predictions

34. It is customary for wind turbine noise predictions to be based on a "worst case scenario" not least because it is in the wind farm operator's interests as much as wind farm neighbours' interests to avoid the risk of noise limits being breached. In this case the predictions have been based on assumptions that the turbines would be operating at the manufacturer's maximum warranted sound power level, would be positioned down wind of the immissions receptor and that both climatic and ground conditions would be adverse. While this gives some comfort that the predictions would prove robust, they are based on a potential "candidate turbine" rather than that which might actually be installed. This is not unusual because final choice is dependent upon factors such as turbine availability at the time required and technological enhancements during the intervening period. As the Appellant Company's acoustician concedes, concern in this respect is often dealt with by a condition requiring revised predictions for the turbine actually selected to be submitted for the Council's prior approval. The Council has not requested such a condition and is content to rely on a condition requiring that the maximum permissible noise levels are not exceeded.

35. That approach is criticised by SHOWT for two main reasons, namely that there may be differences in tonal characteristics and patterns of noise propagation across different octave bands between the candidate and selected turbines which would not then be recognised, and also that the effects of wind shear have also not been fully taken into account. However, ETSU-R-97 recognises potential tonality arising from wind shear by applying a "penalty" in anticipation of it (pages 69-82). As with the measurement of background levels, I find no other advice of equal or greater provenance. Wind shear might, in some atmospheric conditions, disengage the normal relationship between turbine rotation and wind speed (experienced at 10 m or lower height). This is because wind speed might be greater in the upper atmosphere, with two potential effects. Firstly, if the turbines are rotating more quickly than expected, they might make more noise than predicted. Secondly, the masking of turbine noise at ground level by the noise of the wind itself (because higher in the atmosphere and above tree canopy height) might be much diminished. Nonetheless, neither of these effects alter the maximum permissible noise limits. To the extent that such limits might thus be breached (whether through tonal penalty or wind shear), enforcement of the noise limits set through the ETSU-R-97 process would in my estimation provide suitable remedy, albeit on a reactive rather than predictive basis.

Formulation of noise conditions

36. As matters stand, with the background noise levels in the EIA recalculated to address the acknowledged shortcomings relating to rainfall and clock error, the noise predictions indicate that night-time noise limits would not be exceeded at any of the identified receptor locations. During the day time hours, if the fixed

limit is set at 35dB(A), the absolute "worst case" predictions indicate (document 33 appendix 9) that the limit would be exceeded at Thetford Farmhouse, Dawson's Farm, Road Green House and assessment locations H9 (derived from 21 Old Market Way) and H13 (derived from Dawson's Farm). At Old Market Way, H1, H7, H8, H10, and H14 the predictions are 1dB or less below the 35dB limit. If the limit is set at 40dB(A), Thetford Farmhouse would be the only property where predictions indicate potential risk of excess noise, the relevant noise curves becoming tangential at a wind speed of 6 m/s. In order to reach the position advanced by the Appellant Company, that the proposal would be fully compliant with ETSU-R-97 noise limits, it would thus variously have to be accepted that more than the 35 dB(A) lower limit should be applied, and/or that background noise levels have been measured or assessed and turbine predictions undertaken to within an accuracy of 1dB(A). Such general assumptions are in my view unwarranted.

37. That said, Thetford Farmhouse is an isolated property and does not act as a surrogate for others. On the basis of two of the ETSU-R-97 criteria (number of dwellings in the neighbourhood and duration and level of exposure), it seems to me that the 40dB limit is the appropriate one to apply here, even though at wind speeds between about 4 m/s and 6 m/s the predicted increase in noise would be greater than the normal background+5dB limit. Dawson's Farm is similarly isolated, as is H13 which is "paired" with it, so I attach the same judgement to those two cases. However, given the number of properties for which 21 Old Market Way is surrogate, and the predicted noise levels concerned at a range of different windspeeds, I take the view that a 40 dB(A) limit would allow for an excessive margin of error in measurement and calculation and thus risk greater noise exposure at the locations concerned than is either necessary or, in my judgement, appropriate. I have no evidence before me on the third of the ETSU-R-97 criteria (implications for the amount of electricity generated) because the effects of operating one or more turbines at reduced power output in certain wind conditions has not been assessed in the evidence. Nonetheless, given the Appellant Company's own confidence in the accuracy of their acoustician's predictions, which show that 37.5 dB(A) can be comfortably adhered to during quiet daytime periods, I take the view that this is the figure that should be inserted in the relevant parts of any noise condition (for 21 Old Market Way and the locations for which it is intended to be surrogate).

Turbine noise not predicted by ETSU-R-97

38. Although unpredicted noise is an acknowledged phenomenon with wind turbines, it would seem to occur very rarely and further investigation of it has been discounted by Government following the findings of the Salford Report. .

39. Nonetheless, SHOWT's acoustician produced a suggested draft condition for discussion at the Inquiry. In essence, it seeks to define the noise to be controlled by reference to the frequency of its peaks, thus identifying "thumps", "whoomphs" and "whooshes" that might otherwise be overlooked by the "averaging" of noise levels over a set period in the orthodox ETSU-R-97 methodology based on L_{A90}. As such, however, the suggested condition would still safeguard against only some of the "unpredicted" sounds that turbines have been claimed to produce. It would also leave considerable scope for dispute as to whether noise should be measured inside or outside the dwelling

concerned and the process by which a complaint would progress from investigation (who by, and when?) to enforcement (how and to what effect?).

40. Whatever the case may be in those respects, however, the Appellant Company robustly opposed the suggested condition. In essence, the only evidence before me indicates that it would be a very unlikely event that unpredicted noise did occur. If it did, it would be likely to occur only periodically, very infrequently and for short periods of time. The sounds, though audible, might in any event be judged to fall within a threshold of acceptability. In the context of Circular 11/95, evidence of need for such a condition is therefore simply not there. I further conclude on the basis of the information before me that it would be unreasonable to seek to control unpredicted (and unpredictable) noise by planning condition, because to do so would potentially curtail power output from the proposed development unnecessarily.

(b) Visual amenity

41. The planning system exists to regulate the use and development of land in the public interest. While there is a public interest in avoiding the effects of climate change, for the most part the outlook from private property is a private interest, not a public one. There is, however, a public as well as a private interest in protecting the visual amenity of individual homes where, especially in combination with other impacts such as noise and shadow flicker the presence of wind turbines might be widely regarded as making the property concerned an unattractive (but not necessarily uninhabitable) place in which to live. It is in those terms that I have assessed the effects on visual amenity from neighbouring houses.

42. There is no suggestion that overshadowing or "flicker" effects in this case would be significant, the latter being a subject that can be suitably dealt with by planning conditions. Three properties were specifically drawn to my attention as being exposed to over-dominant views of the proposed turbines, these being Thetford Farmhouse, Lyndhurst and Meadow View.

43. Thetford Farmhouse stands about 715 m to the north of turbine T4. I saw that it is positioned end-on to that turbine, its main living rooms originally oriented to face east and west. However, fully glazed patio doors have been inserted in its south facing gable end wall. Nonetheless, although there is a small sitting out area in front of these doors, the garden area immediately beyond is densely vegetated and the wider garden boundary is defined by trees and shrubs which lend a pleasantly secluded quality. There would be glimpses of turbine T4 and more distant other turbines from various points around the garden, but their presence would be neither unavoidable nor overwhelming from within the dwelling nor, it seems to me, damagingly so from its external environs.

44. Lyndhurst and Meadow View are two bungalows sited alongside each other on the south side of Bungay Road, east of Hempnall and about 700 m from the nearest turbine, T2, to the north east. Turbine T1 would stand directly to the front of them but at a distance in excess of 1 km and turbine T3 would be about 750 km distant, further to the east than T2. Both of these dwellings have main entrance doors, bedroom windows and lounge windows to the front (north facing). There is a single east facing bedroom window in the flank of

Meadow View, while Lyndhurst has a conservatory and a well tended garden on its east side. Both properties at present have open outlooks across Bungay Road (in the case of Meadow View above a front hedge) to a pattern of flat, open fields beyond and blocks of woodland (including Little Wood) further off. I saw that both dwellings are functionally associated with the large farmyard directly behind them, sharing interconnected accesses. The only sitting out area at Meadow View is alongside a garage drive across the rear of the property. It may be that many people not engaged in farming would find the close physical, functional and visual relationship between these properties and the farmyard with its sizeable buildings to be representative of less than ideal living conditions, but the contrast with the open outlook to the north and east is very much a compensatory factor. The quality of that outlook could to be held to be diminished by turbines extending across about half of the field of view, but the perception of openness would not, in my estimation be significantly reduced given the separation distances involved both from the respective houses and between the turbines themselves. In my estimation, neither property would become an unattractive place in which to live because of the turbines.

45. A further property, known as "The Bungalow" lies further to the west along Bungay Road, on the edge of Hempnall. The gardens of that property are more extensive and much more vegetated, while the separation distance from the turbines is greater. It would remain, as now, an attractive place in which to live.

46. I found no other properties that would have less obstructed or more proximate views of turbines than these four and am content that in all cases the benefit to the public interest in exploiting wind energy in the manner proposed would outweigh the limited harm which the presence of the turbines would cause to the outlook from the properties concerned.

Issue 4: The implications for local bat populations.

47. In dealing with this subject, the difference between "the application site" and "the turbine fields" is significant and I accordingly use each term with care (see paragraph 4 above).

48. Paragraph 98 of Circular 06/05 makes clear that the presence of a protected species is a material consideration when considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat.

49. There is no dispute that the turbine fields accommodate a range of bat species. These include Common Pipistrelle, Soprano Pipistrelle, Brown Long-eared Bat, Myotis Species, Noctule, Serotine and Barbastelle, all of which are Species of Principal Importance under Section 74 of the Countryside and Rights of Way Act 2000. In addition, there are three blocks of woodland within or bordering the turbine fields that are Sites of Special Scientific Interest. These are Little Wood, Saxlingham Grove (to the north west) and Winter's Grove (to the east), all of which are ancient woodland. Nobbs Lane is also recognised in the ES as being of significance in contributing to the integrity of the Winter's Grove SSSI. It is a long green lane, passing on a mainly north-south alignment alongside Winter's Grove and the part of the turbine fields accommodating Little Wood.

In the context of bats, ancient woodland and species-rich hedgerows (including those bordering Nobbs Lane and other parts of the turbine fields as referred to in paragraph 6.4.2 of the ES), in my estimation fall within the classification under Section 74 of the 2000 Act as Habitats of Principal Importance. The matters that are in dispute focus on the extent to which the presence of the proposed turbines might cause harm to the protected bat species, and the extent to which construction of the proposed access tracks might cause harm to their protected local habitat.

50. On the first of these matters, it is known that bats can be killed by wind turbines. However, while it is an offence under regulation 39 of the Habitats Regulations (subject to certain defences or in the absence of a licence) to deliberately kill, capture or disturb bats, species protection under the 2000 Act is concerned with safeguarding local, regional, national and international populations, rather than each individual bat.

51. In order to establish the nature and size of the local bat population at Hempnall for the purposes of the ES, a pre-survey assessment was undertaken in the form of desk study supported by a visual inspection of the turbine fields to identify the likelihood of roosts being present. A survey programme was then devised in consultation with Natural England involving 6 full night hand-held detector surveys conducted between April and October 2007 (the "transect surveys"). These recorded a total of 361 "bat passes" ranging from 272 Common Pipistrelles to 1 "unidentified large bat". By way of calculation that the ES recognises to be treated with considerable caution, the conclusion was reached that none of the bat species was present in sufficient number to be considered regionally significant to bat populations. However, for the purposes of the Inquiry, additional survey work was undertaken in 2009 using both hand held and static bat detectors. It is to be expected that static detectors will record more passes than hand held detectors simply because they are in place for longer, so it is appropriate to consider the two sets of results separately.

52. The 2009 transect survey was carried out over 3 months which is less than the 2007 survey, but comparison of the two sets of results shows the following:

	2007	2009
Common Pipistrelle	108	389
Soprano Pipistrelle	25	119
Brown Long-eared	1	0
Myotis Species	2	0
Noctule	0	0
Serotine	0	0
Barbastelle	0	8

53. Five static detectors were in place from April until September 2009. Only the records for the period April-July 2009 were available before the Inquiry. These record 14,868 bat "passes", mainly Common Pipistrelle (12,478), but also numbers of other species including Barbastelle (over 400), Myotis (108) and

Leisler's (up to 26). Details for the period July-September were subsequently disclosed during the Inquiry. The corresponding figures disclose some significant increases as well as some small decreases, as follows: Common Pipistrelle (19,469), Barbastelle (1,244), Myotis (104) and Leisler's (31). Bat passes cannot be translated directly into bat numbers and it is also necessary to consider how likely it is that collisions of bats with turbines is likely to occur. In this respect, I was advised that different species of bats have different flight patterns, some preferring to forage near to the ground and along hedgerows, while others might fly at higher levels and across more open ground.

54. Technical guidance was produced nationally on the subject by Natural England in Februrary 2009 (CD49). Among other things, this remarks that Pipistrelles emerge early "often in daylight" and can fly in open or cluttered situations hunting for prey "along tree and hedge lines, along woodland edges and around single mature trees". They are regarded as having medium collision risk with turbines. Barbastelles are referred to as being strongly associated with woodlands but have been recorded foraging over a range of habitats and flying at various different heights. The population of these bats in England is small. Their collision risk is also regarded as medium (reflected in CD51). Leisler's are almost twice as populous in England but still small in number compared with Pipistrelles. They are categorised as having a high collision risk with turbines because they fly long distances at altitude, and forage over open spaces as well as along hedge lines. Myotis species are, in comparison with all but Pipistrelles, relatively common in England and regarded as having low collision risk.

55. Assessment of danger to species is hampered to some degree in this case by the absence of bat counts in the turbine fields at the level of the turbine blades, by the misplacement of the recorder intended to be closest to turbine T4 and by there having been no recordings made in the vicinity of turbines T2 and T3. While the latter are well away from typical bat habitats, it is possible that high flying species foraging on open ground (especially "high risk" Leisler's) have been missed. Whatever the case may be in those respects, SHOWT's expert witness on the subject and an adviser to the Appellant Company at the time the ES was compiled both suggest that the local population of bats now recorded is significant. The latter, in particular, advances the proposition that it would not be unreasonable to guess that between one and five Barbastelles might be in collision with the proposed turbines each year, adding "*Therefore, an average sized East Anglian Barbastelle breeding colony could potentially be at risk of losing 15% of juveniles or adult females each year. This would be unsustainable losses leading to the extinction of the family group*" (document 73). While that is opinion rather than evidence-based fact (and was not open to cross-examination), it is the opinion of a bat expert who, as the ES records, is Chairman of the Norfolk Bat Group, and whom I thus regard as being best placed among the experts to impart local knowledge of the subject.

56. Turning to habitat, the ES indicates that certain areas in and around the turbine fields are used more frequently than others and that Nobb's Lane and the north eastern section of Bussey's Loke represent an obvious flight route. Other "hotspots" are identified, including Little Wood, one of the farms near the Bussey's Loke turning and the footpath west of Saxlingham Grove. Among

these, it is suggested that likely roost locations include Little Wood and the farm buildings, although some uncertainty is expressed about Nobb's Lane. The ES further states that important foraging areas include Nobb's Lane, its extension towards Fyland's Farm and Little Wood and the habitats linking to Winter's Grove. Since these findings are based principally on the 2007 transect surveys for bat counts, they are open to much the same criticisms as the counts themselves and cannot therefore be regarded as comprehensive. They do nonetheless give at least some indication of the parts of the turbine fields in which bats should be protected from risk of collision with turbines and the parts of the application site where damage to, or removal of, habitat might be harmful to some bat species.

57. Natural England were consulted by the Council on the proposals at application stage and (letter dated 20 May 2008) welcomed that during the formulation of the proposal the layout of the turbines had been adjusted to ensure that they would be as far away as possible from the woodlands, hedges and other linear features considered to be of potential value to bats, that a 50m buffer zone was to be provided between Nobb's Lane and the proposed access track, and that off-site mitigation on land to the west was to be undertaken. It cautioned that because of changes to the Habitats Regulations, incidental damage to breeding sites or resting places, including mature trees supporting bat roosts on site, would be open to prosecution without defence. Reference was also made to a guidance note stressing the importance of post-installation monitoring of bats involving detection devices and corpse searches, adding "if impacts are found to be significant, options to restrict the operating times of the turbines should be explored to avoid peak bat movements at dawn and dusk".

58. Following the 2009 re-survey, the Appellant Company's bat expert re-consulted with Natural England which responded (document 40) "*Our advice on the original application has been modified by the new findings concerning Barbastelle bats. Our precautionary conclusions, based on the evidence of the new survey work, are that Little Wood and Saxlingham Grove are important roosts and may be maternity sites and there are foraging routes adjacent to the hedgerows across the site. The landscape is clearly important to Barbastelles in this area, and there is therefore a high degree of risk to the population…..We have no particular concerns with the locations of turbines T2, T3 and T4 but we are concerned that turbines T1, T6 and T7 are close to lots of bat activity. Turbine 5…might still be a problematic location……In terms of our outstanding areas of concern, our senior specialist has asked if it is possible for you to provide maps of static detector results, accurate distances from hedge lines and then do the calculation in our guidance TAN051 and if the turbines are still problematic could you explain why they could not be moved further into the fields (if the fields are arable, this would surely not be impossible?). If the location is immutably fixed, the mitigation proposed by Peter Shepherd - ie turning off of turbines at night, would represent the best alternative should planning permission be granted*".

59. In consequence of criticism that this consultation had been undertaken on behalf of the Appellant Company "behind the back" of the Council, acknowledgment that the detector for turbine T4 had been positioned incorrectly (leading to a suggestion that different turbines should be turned off

at night) and the fact that Natural England had not been made aware of the last suite of static bat detector counts, I requested that further consultation take place. In doing so, I advised that Natural England is the Government's main source of technical advice on ecological matters and that my findings on the "bats issue" would be led by its advice.

60. In response to the fresh consultation (as part of which the Appellant Company asserted that no more than a total of three turbines would be switched off), Natural England (document 21) affirmed that it stands by its position that the site (which I take to mean the turbine fields) is clearly of importance for bat populations and, therefore, mitigation for potentially adverse effects on these populations will need to be secured before planning permission is granted. It also referred to TAN051 advice that the most important consideration in avoiding impacts on bats is siting turbines at least 50 m away from linear features such as hedgerows and recorded its understanding that this would be the case (which drawings and calculations provided by the Appellant Company confirm). It further advised that turbines T1, T5 and T7 should be turned off but recommended, in the absence of counts for turbine T4, that construction and operation of that turbine be delayed until survey data has been collected and evaluated.

61. In interpreting this advice I have had regard to Planning Policy Statement 9 (PPS9) "*Biodiversity and Geological Conservation*". In particular, on page 2, this sets out the Government's vision and objectives, including for the promotion of sustainable development, and the Key Principles in paragraph 1. It seems to me that the vision's headline statement "working with the grain of nature" implies an approach that plans development around nature conservation interests rather than one which designs development proposals and only then seeks to mitigate its effects. This is the thrust of key principle (vi), which says that the aim should be to prevent harm. The key principle then advances three potential courses of action where the grant of permission would result in significant harm. I do not regard these as a menu of equal choices but as a sequential range of choices. It concludes by advising that if significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused. In terms of significant harm, I consider risk to the population of Barbastelles identified by the Chairman of the Norfolk bat group to be significant and I add to that the as yet unidentified level of risk to Leisler's bats. Risk to habitat in this case, however, arises from the formation of gaps in hedgerows (potentially involving the loss of one or more trees that might contain roosts) to form the proposed access tracks. This is a matter that can in my estimation be suitably dealt with by careful programming of investigation and construction after any grant of permission.

62. With regard to risk to species, however, the first course to be considered is whether I am satisfied that that the development cannot reasonably be located on any alternative sites that would result in less or no harm. I take this to mean development in the form of each individual turbine, rather than the proposed wind farm as a whole, because it would plainly be disproportionate to require the relocation of an entire development if adjustment of the siting of only part of it would overcome any concern (as in the Carsington case). It is clear from the May 2008 consultation with Natural England that some iteration

of turbine siting took place after the initial bat surveys and before the planning application layout was produced and that Natural England was content with that and the assurance provided by 50 m buffer zone alongside Nobb's Lane. That stance was reached, however, on the basis of the original bat counts.

63. In the light of the additional bat counts to July 2009, Natural England expressed reservations about the siting of Turbines T1, T5, T6 and T7 but would seem to be content if the TAN051 separation distances could be achieved. I note that this conclusion makes no reference to the absence of bat counts at high level or in the vicinity of other turbines, notably T4. It was certainly aware of the latter in its final response to the September 2009 bat counts. In that response, it emphasises (in bold type) both the apparent importance of "the site" to bats and the need for mitigation. It must be assumed that Natural England is fully cognisant of the difference between avoidance (turbine re-siting, or securing adequate separation distances using the 50m criterion) and mitigation (delaying construction of turbines and/or turning potentially harmfully sited turbines off), so it follows that the advice to me from Natural England is that I should not be satisfied with avoidance on the basis of 50 m separation alone and should also look towards the inclusion of suitable mitigation. That mitigation refers to four turbines not three, and to five turbines if its previous response (document 40) is taken into account without the Appellant Company's imposed limitation to consider only three. On this point, I share the Appellant Company's view that preventing the construction of turbine T4 pending further survey work would be excessive because, whatever the outcome, it would only be necessary to turn T4 off when bats are active. Conversely, however, I do not accept the Appellant Company's argument that the need to address climate change overrides any requirement to turn more than three of the turbines off at such times. From the PPS9 biodiversity conservation perspective, there would be little point in addressing climate change if the effect of doing so in itself damages biodiversity – in medical parlance, the cure would be no more beneficial to that particular interest than the illness. To my mind, the requisite level of mitigation, in line with PPS9 and Natural England advice, would be to turn at least four of the turbines off during bat "risk" periods, and preferably five, at least until further investigation and monitoring of bat activity and mortality has been systematically undertaken.

64. No specific reference is made to the third course, "compensation", by Natural England. I remark only that the proposed bat flight route would represent a useful addition to the local habitat for bats and other species but does not, in my estimation, represent a suitable or sufficient alternative to either "avoidance" or full and effective mitigation.

65. To conclude on this issue, I draw upon paragraph 6.13 of the Appellant Company's closing submissions (whether the derogation tests under Regulation 3(4) of the 1994 Regulations applies or not). Firstly, I am not content that the proposed mitigation is either adequate or is "as supported by" Natural England. Secondly, nor am I convinced that a favourable conservation status of the species (Barbastelles in particular, but in the absence of surveys at altitude and in appropriate locations, other species too) would in consequence be maintained at local or regional level (although turning three turbines off might be more effective in this respect than turning none off).

Issue 5: Equestrian interests

66. People pass through a diverse variety of environments when going about their daily lives, whether by car, on horseback, or when using the local rights of way network. Beyond my foregoing findings on specific landscape, cultural heritage and residential amenity impacts, I find nothing generally objectionable in turbines being part of that broad visual experience. The position with regard to equestrian interests is not, however, entirely a visual one, because matters of public safety and business interests also arise. Such matters were raised in a number of representations to the Inquiry and I therefore deal with them separately here.

67. The companion guide to PPS22 records that the British Horse Society, following internal consultations, has suggested that 200 m exclusion zones be safeguarded around bridle paths to avoid wind turbines frightening horses. It adds that while this could be deemed desirable, it is not a statutory requirement, and some negotiation should be undertaken if it is difficult to achieve. To my mind the Companion Guide must logically extend to any route used by horses where riders and their mounts might be endangered by the presence of turbines, so I include the local roads (such as Busseys Loke itself) in this as well as "permissive routes" made available by private land owners and which riders and the public in general are thus able to use.

68. The Companion Guide amounts to only a brief summary of the BHS advice, which actually states that BHS current policy is, as a starting point, to seek a separation distance of four times the overall height of the proposed turbines for National Trails and Ride UK routes as these are likely to be used by equestrians unfamiliar with turbines, and a distance of three times overall from all other routes "*with the 200 m recommended in the Technical Guidance to PPS22 being seen as the minimum, where it is shown in a particular case that this would be acceptable*".

69. None of the parts of any equestrian routes near the turbines are, however, National Trials or Ride UK routes, and none are included in the Norfolk County Council's recommended Bridle and Cycle Routes (document 55). As such, I regard their main usage to fall within the "local rider" category. The BHS policy highlights the principal equestrian concerns as being blade shadows, blades starting to turn, noise levels from turbines and snow and ice throw, to which is added, generically, the construction phase.

70. The casting of shadows depends on the strength and height of the sun, its position in the sky relative to the turbine blades and to the rider, and the masking effect of shading from other sources such as hedgerows bordering Nobb's Lane. The sun does not shine every day and I doubt that it would be a great inconvenience for local riders to avoid passing close to the turbines, on relatively open ground, at times when the sun is sufficiently low in the sky to cast long shadows through the rotors. The risk of a turbine suddenly starting to turn just as a horse passes by is small but, to the extent that it is a risk, it has to be put in the context of the risks associated with riding in general – horse-riding is an inherently hazardous pastime and horses are likely to be startled by a great many things ranging, for example, from a wind blown plastic carrier bag to the sudden sound of a nearby bird-scarer. Good horsemanship requires riders to be alert to potential dangers and, when

choosing where to ride, to recognise their own abilities and the senstivities of their mounts, and it is in my view unrealistic for riders to expect all risks to be excluded from anywhere that they may choose to ride. The latter would effectively exclude turbines from most of rural England. Ice throw can be avoided by fitting sensors to the turbines, as the PPS22 guide advises, and (as BHS recognises) disturbance during the construction phase can be minimised by planning conditions and endures only for a period of time in any event. That said, the rotors of turbines T2, T4, T6 and T7 would all fall within the 200 m distance of what I would regard to be local equestrian routes and, in the absence of evidence on electricity generation that moving the turbines to achieve the recommended minimum distance would have (and thereby minimising inconvenience to riders or unnecessarily creating additional safety hazards), it is not possible for me to assert that the proposal represents a sensitive exploitation of renewable energy sources in accordance with PPS22 policies and clause 16(iv) of PPS7.

71. A more particular concern was raised by the occupier of a nearby farm, now used in large part for an equestrian business based upon the treatment of injured racehorses associated mainly with Newmarket racing industry. These, I was told, can be highly strung and often valuable animals. Letters from the broker acting for the insurance of this business indicate that cover for injury or death to animals in the care of the business arising from the turbines cannot be secured. However, the farm is an extensive one, and the nearest turbine (T6) would be about 800 m or more from the end of the training gallop. That is almost double the separation distance from turbines recommended by BHS even for riders unfamiliar with the area, and the riders in this case are likely to well-experienced jockeys, who would be on private land unexposed to the risk of passing traffic. One of the tracks used for exercising the horses passes within only about 50 m of turbine T6, but there is a wide range of alternatives available, so I regard the presence of the proposed turbine as an inconvenience rather than an unavoidable safety hazard. As with the recreational riding routes, however, without evidence on the effect on electricity generation of securing a greater separation distance (of, say 200 m from T6), it is not possible for me to assert that the proposal represents a sensitive exploitation of renewable energy sources.

The balance of energy supply and environmental considerations, including consideration of the relevant policies

72. There is no dispute over the national need to address climate change and the importance attached by the Government to the role of exploiting sources of renewable energy in doing so. This is manifest from a range of publications including, for example, the Renewable Energy Strategy 2009, the Energy Act 2008 and the Climate Change Act 2008. In these and other policy documents, energy targets are expressed in a number of different ways, whether for energy in general or electricity alone, from all sources or from particular technologies, as power generated, supplied, consumed, or as aspirations or binding requirements. This complexity of expression provides the general context for the formulation of spatial planning policies and development proposals intended to respond, in land use terms, to meeting the nation's energy requirements. However, paragraph 3 of PPS22 stipulates that Regional spatial planning targets should be expressed primarily as the minimum amount

of *installed capacity* for renewable energy. Such targets are intended to inform the formulation of criteria based policies at District level, as advised by paragraph 6 of PPS22, but at neither Regional nor District level are they required to meet any prescribed proportion of the Nation's, Region's or District's energy needs. Rather, as paragraph 2 of PPS22 makes clear, the Regional targets are to be derived from an assessment that has regard to the particular Region's renewable energy resource potential taking into account the Regional environmental, economic and social impacts that may result from exploiting that potential.

73. The Appellant drew particular attention to paragraph 40 of the Climate Change Supplement to Planning Policy Statement 1 "*Planning and Climate Change*" (PPS1S), pointing out that this introduces an expectation of "expeditious and sympathetic handling" of the planning application. However, the primacy given to the development plan established in paragraphs 7 and 8 of PPS1 "*Delivering Sustainable Development*" is re-affirmed in paragraph 38 of PPS1S. In that respect, paragraph 39 of PPS1S acknowledges that some development plans may be in need of up-dating and, where this is found to be so, advises that consideration should be given to how proposals could be amended to make them acceptable, adding that where this is not practicable, to consider whether permission should be refused. In this case the Appellant Company made clear to me that no amendments were to be tabled. I do not regard that stance as exceptional, given that amendments at appeal stage may compromise the sufficiency of the Environmental Information before me. It does, however, leave me with only two options – to permit or refuse the scheme as submitted.

74. To my mind, the policy balance in this case depends, in accordance with paragraphs 38 and 39 of PPS1S, on the extent to which the extant development plan is consistent with PPS1S Key Planning Objectives and the extent to which the proposal is, in itself, consistent with whichever of the development plan polices and/or the Key Planning Objectives that are applicable. The expectation of "expeditious and sympathetic handling of the application", as required by paragraph 40 of PPS1S (inasmuch as this might be taken to mean more than administrative processing) follows only after such considerations because it applies to proposals "that will contribute to the delivery of the Key Planning Objectives".

75. The development plan in this case includes Regional Spatial Strategy (RSS) in the form of the East of England Plan (May 2008), together with a range of "saved" policies in the South Norfolk Local Plan (2003). I am aware of the recent judgment by Mr Justice Mitting in relation to the challenge to policies HA1, LA1(2), LA2, LA3 and SS7 of the RSS. However, I do not consider that those policies are of direct relevance to the appeal proposal, so I do not consider that the judgment prevents me from giving full weight to those policies in the RSS which are relevant to this appeal. It is common ground that the relevant policies are ENG1, ENG2, ENV2, ENV3 and ENV6.

76. RSS policy ENG1 urges Local Planning Authorities, among other things, to encourage the supply of energy from decentralised, renewable and low carbon energy sources. By referring to "energy", its scope is not limited either to electricity or to on-shore wind, these being topics that are addressed more precisely by policy ENG2. That policy sets the target that by 2010 10% of the

region's energy, and by 2020 17% of the region's energy should come from renewable sources, excluding off-shore wind. The Appellant Company acknowledged that these targets are expressed as "generation" targets, and they are converted in paragraph 9.6 of RSS into installed capacity targets for electricity, as 820 MW by 2010 and 1620MW by 2020. In amplification of paragraph 9.6, I was told that the policy ENG2 targets had emerged from studies undertaken during the period from 1999 to 2007 and deliberations of the "East of England Sustainable Development Round Table" but were largely based on consideration of resource potential, national landscape designations and a desire or aspiration to reflect the Region's energy consumption rather than on a full assessment of environmental, economic and social impacts. It might thus be said that policy ENG2, by setting "challenging" generation targets and translating those into installed capacity targets before regional environmental, economic and social impacts have been evaluated, represents a reversal of the approach that paragraphs 2 and 3 of PPS22 intend.

77. In line with paragraph 9.8 of RSS, work on the targets has since been taken forward in a study commissioned by the Regional Assembly from Ove Arup, titled "Placing Renewables in the East of England". This study is intended to inform a future review of RSS to include sub-regional targets based on an assessment of potential together with locational criteria. In the event, the Ove Arup Study (CD14) has indicated that it would be feasible to meet 20% of the Region's expected electricity *consumption* by 2020 (Scenario 2) from a range of technologies including wind. Even though this anticipates half the resource from on-shore wind compared with the "theoretical maximum" (Scenario 1), caution is expressed about the consequential environmental implications of turbines being located "all over" the unconstrained and variably constrained areas (paragraph 6.7.3). It suggests identification of an "area of likely concentration" for wind turbines. This would not include the appeal site, but equally would not exclude turbines here or anywhere else (paragraph 8.4). Significantly, the study includes a theoretical calculation of potential input into the capacity target from each of the former Countryside Agency's Joint Character Areas (JCAs) in the Region. In essence, this suggests that the JCA in which the appeal site lies (which covers a large swathe of Norfolk and Suffolk) could contribute 60-100MW of installed capacity amounting to between 24 and 40 turbines of the size proposed in the appeal scheme (table, page D12).

78. None of this can be translated directly into development control policy or be applied to individual schemes, as the Ove Arup study is at pains to repeatedly stress (page D11), but it is indicative of the assumptions underlying the study's finding that it would indeed seem possible to generate 17% of the region's electricity from onshore renewable sources (not just wind) by 2020. Those assumptions have yet to be tested through consultation, publicity and examination processes, leaving the targets (in the form intended by PPS22) susceptible to adjustment or to raising or lowering the threshold of environmental acceptability, or to some combination of them all. .

79. The Statement of Common Ground avers that of the Region's present 820MW target for 2010, onshore wind projects are expected to contribute 647MW, while the installed capacity to date amounts only to 127MW. It is already clear that the RSS 2010 target will, as a matter of fact, thus be missed by "a Norfolk country mile". However, given all of the foregoing circumstances, little

significance can, in itself, be attached to this. The most that can be said is that the 2020 target is a cumulative one, including 2010 and, in the light of LP policy UTL13 (which adopts a welcoming stance to renewable energy projects in general, provided the energy benefits outweigh the environmental harm) the sooner renewable electricity is produced the greater the benefit will be in delivering the Government's Climate Change Programme and energy policies in line with the first of the key principles in the Climate Change Supplement to PPS1.

80. On the other side of the balance lies the quantification of environmental harm. In that respect, I am aware that the Council's use of its Landscape Assessment Study, and the Sensitivity Study in itself, both approach the subject of wind farm development only from a landscape impact perspective, ignoring other matters that are relevant to the capacity for, and distribution of, such development (including, for example, wind resource and grid capacity, as well as social and economic factors). However, neither study places an overall cap on wind energy development in the District, and landscape sensitivity has not been set at such a level that the capacity envisioned in the Ove Arup advice to the Regional Assembly could not be met or exceeded across the wider JCA. To that extent there is no demonstrable inconsistency with extant or emerging RSS at District or wider sub-regional level. Given also that the Council's ability to guide the location of turbine development is exercised primarily through policy formulation and/or the grant or refusal of planning permission, with the process of site selection being initiated by developers, I see no reason to seriously question the relative distributional pattern of wind energy development that the sensitivity study seeks to facilitate. Given my findings on the first main issue, it follows that landscape capacity and, more specifically, the landscape impact of such an extensive wind farm, count against the proposal and lead to conflict with RSS policy ENV2 (bullet points one and two) and saved LP policy ENV1.

81. The position regarding cultural heritage is less clear cut. Plainly it is desirable to preserve (or enhance) the settings of the Listed Buildings and Conservation Areas, and views into and out of the latter, to which I have referred in the second main issue. Paragraph 1.3 of PPG15, however, cautions that the historic environment of England is all pervasive and cannot, in practice, be preserved unchanged. Moreover, RSS policy ENV6 (sixth bullet point) takes the form of guidance to Local Planning Authorities rather than detailed development control policy, and LP policy IMP15 is not determinative since it requires only that special attention be given to certain factors when considering development affecting the settings of Listed Buildings. Policy IMP18 takes a more stringent stance with regard to the settings of Conservation Areas, although protection of views in and out (notably at Saxlingham Green and Fritton) flows from paragraph 4.14 of PPG15 rather than from statute. In each case where I have identified harm to setting and/or views it is apparent that sufficient of the setting or view would remain preserved to enable the building or settlement and its historically important environs to still be appreciated and enjoyed. On balance, when calibrated against the need to address climate change, I consider the appeal scheme to be acceptable in terms of its impact on cultural heritage features.

82. I am also content that noise can be adequately dealt with by planning conditions, although some adjustment of the permitted quiet day-time noise limits suggested would in my judgement be desirable to ensure increases in ambient noise levels are minimised in line with paragraph 41 of the PPS22 Companion Guide. Subject to that, I find the proposal compatible with LP policy IMP 10 and, given my findings on issue 3, with policy IMP 9 (clauses (ii) (iii) and (iv).

83. However, under issue 4, I find that the proposal would impart serious risk to at least one local bat population of regional significance. To have certainty that mitigation would be sufficiently effective (as a second-best alternative to avoidance) would require a greater number of turbines to be turned off while bats are active than the Appellant Company is willing to concede. Paragraph 16 of PPS9 makes clear that permission should be refused where harm to protected species would result, unless the need for and benefits of the development clearly outweigh that harm. RSS policy ENV3 (sixth bullet point) adds that regard should be paid to the need for habitats and species to adapt to climate change, a sentiment that is mirrored in the fifth Key Planning Objective of PPS1S. These caveats do not mean that species protection should invariably be subordinated to the generation of electricity from the wind. Indeed, I regard the two as twin objectives that ought to be pursued together. That is certainly not possible, however, while information on bat usage of the turbine fields is incomplete and when the nature and extent of mitigation is unilaterally held up by the Appellant Company to be immutable. This does not, in my judgement, represent the sensitive exploitation of renewable energy sources in accordance with the policies set out in PPS22.

84. I make no further comment on equestrian interests, other than to remark that the proximity of turbines to riding routes without quantification of the economic effect of greater separation might also be regarded as insensitive, albeit riders are not a protected species and not subject to a similar regime of policy protection as bats.

Other matters and overall conclusions

85. The development plan must be read as a whole and compliance with it judged accordingly. In that broader context, the main relevant policy thrusts are to promote sustainable development including renewable energy generation while safeguarding the quality of the local environment. I do not find this inconsistent with the policy approach in PPS1S, although drawing upon the approach in paragraph 39 I note that the second Key Planning Principle advises "in providing for…infrastructure needed by communities….secure the highest viable resource and energy efficiency and reduction in emissions". Viability in this sense could be interpreted in many different ways, but I regard it as a concept that embraces consideration of environmental, social and economic capacity and not just maximisation of output. The latter would imply that the maximisation of renewable energy generation would override all other considerations, and that is a position that was not adopted at the Inquiry even by the Appellant Company. I have no doubt that there is capacity for wind energy development at Hempnall, but turbine siting and mitigation should follow rather than precede further investigation of bat activity within the turbine fields and the overall extent of the proposed wind farm should be more responsive to the identified sensitivities of the local landscape. It is my

conclusion that the appeal scheme, in the fixed form that it comes before me (whether because of Environmental Assessment Regulations implications, or the Appellant Company's own stipulations), exceeds the highest viable resource compatible with environmental and biodiversity safeguards. As such, I find that it does not comply with the development plan or with PPS1S objectives. While unconvincing in themselves, my conclusions on issues 2 (paragraphs 18, 19, 20, 25 and 81), 3 (paragraphs 37 and 82) and 5 (paragraphs 70 and 84) further reinforce my view that the combined impacts of this particular proposal would exceed the highest viable resource compatible with environmental safeguards. I have considered all other matters raised in the representations but find nothing to outweigh that conclusion or to warrant a decision other than in accordance with the statutory development plan as I interpret it. The appeal therefore fails.

D Lavender

Inspector

APPEARANCES

For The Appellant:

Mr David Harvey LLB(Hons), BCL(Hons)(Oxon)	Partner, Cobbetts LLP 1 Whitehall Riverside, Leeds, LS1 4BN
He called	
Mr D Stewart MA(Cantab), DipTP, MRTPI	Principal, David Stewart Associates
Mr C Goodrum BSc(Hons), DipLA, CMLI	Partner, LDA Design
Dr J Edis BA, MA, PhD, MIFA, IHBC	Director, CgMs Ltd
Dr P Shepherd MIEEM	Partner, Baker, Shepherd, Gillespie
Mr M Hayes BSc, MIOA	Partner, The Hayes McKenzie Partnership

For The Local Planning Authority:

Ms Morag Ellis	Queen's Counsel, instructed by Mr S L Shortman, Solicitor to the Council
She called	
Ms M Bolger BA(Eng), BA (Larch), Dip LA, CMLI	Chartered Landscape Architect LizLake Associates
Mr D Edleston BA(Hons), Dip Arch, RIBA IHBC	Council's Conservation and Design Architect
Mr P Witham DipTP, MRTPI	Council's Development Control Services Manager

For Hempnall Parish Council, Saxlingham Parish Council and SHOWT ("Stop Hempnall's Onshore Wind Turbines"):

Ms T Douglass	Of Counsel, instructed by Mr Michael Haslam
She called:	
Mr M Haslam MRTPI	Planning policy and general matters
Mr M Stigwood EHO, DipANCE, MIA,FRSH	MAS Environmental - noise
Mr G Peck	CPRE
Ms B Penn	Local resident
Mr A Woodward	Local resident
Ms V Jupp	Equine routes
Mr E Howard	Equine leisure interests
Mr A Hodge	Equine business interests

Mr D Hook	Public rights of way

For Countess Attlee:

Mr Gerald Gouriet	Queen's Counsel, instructed by Countess Attlee
He called	
Mr Philip Richardson MA, Hon Fellow of BNA	Professional Bat Consultant

Interested Persons:
(All opposing)

Mr Moulton	Local resident
Mr Pointer	Local resident
Dr Nolan	Local resident
Mr Willis	CPRE
Mr M Jones	Local resident
Mr Richard Bacon MP	Local Member of Parliament
Cllr Windridge	District Council Member
Mr Wright	Local resident
Mr F Bright	Representing Shotesham Parish Council and Tas Valley Amenity Group

DOCUMENTS

General

Document 1 Core documents, as follows:

1. East of England Plan
2. Saved policies of the South Norfolk Local Plan
3. Council's SPG on Landscape and Visual Assessment of Wind Turbine Development (2000)
4. PPS1
5. PPS7
6. PPS9
7. PPG15
8. PPG16
9. PPS22
10. PPG24
11. Various Wind Farm Appeal and Application Decisions, including (but not limited to):

    (a) Knabs Ridge, Harrogate (APP/E2/34/A/04/1161332)

    (b) Darracott, Torridge (APP/W1145/A/03/1119641)

    (c) Bradwell (APP/X1545/A/06/2023805)

    (d) Shooters Bottom (APP/Q3305/A/05/1181087)

    (e) Fullabrook Down (GDBC/003/00024C)

    (f) Crimp (APP/C0820/A/07/2047583)

(g) Kiln Pit Hill (APP/R2928/A/08/2075/105)
(h) Hellrigg, Silloth (APP/G0908/A/08/2073524/NWF)
(i) Bradworthy, Torridge (APP/W1145/A/02/1105474)
(j) Carsington (APP/P1045/A/07/2054080)
(k) North Dover, Little Pineham Farm (APP/X2220/A/08/2071880)
(l) Den Brook (APP/Q1153/A/08/2017162)
(m) Carsington [20091 EWHC 1729 (Admin)
(n) Middlemoor (GDBC/001/00245C and ELEC/2005/2004)
(o) Thackson's Well (APP/E2530/A/08/2073384)
(p) Keadby (GDBC/003/00025C/1 and GDBC/003/00025C/2)
(q) Mynydd y Betws (APP/M6825/V/08/2064826; APP/M6825/X/515052 and APP/M6825/X/515053)
(r) Poplar Lane (APP/L3245/A/08/2088742)
(s) Withernwick (APP/E2001/A/08/2088796/NWF)
(t) Wern Ddu (APP/R6830/A/05/1185359)
(u) Dewlay Cheese (APP/U2370/A/09/2092990)
(v) Aston Grange Farm (APP/L0635/A/07/2047477)
(w) Agricultural land to the east of Grove, Retford (APP/A3010/A/06/2017850)
(x) Longbrook Farm, Thurning, Peterborough (APP/G2815/A/08/2084345/NWF)
(y) Boxworth and Conington (APP/W0530/A/05/1190473)
(z) Laughton (APP/N2535/A/04/1166685)
(aa) Penpell Farm, Par, St Austell (APP/Q0830/A/05/1189328)
(bb) Inner Farm, Edithmead, Burnham-on-Sea (APP/V3310/A/06/2031158)
(cc) Near Wood Farm, Shipdham, Norfolk (APP/F2605/A/08/2089810 (ex 1174295)
(dd) Tivetshall Met Mast (APP/L2630/A/08/2076890)
(ee) Ellands Farm, Hemington (APP/G2815/A/06/2019989)
(ff) Guestwick (APP/K2601/A/05/1180685)
(gg) Beech Tree Farm, North of Goveton, Kingsbridge (APP/K1128/A/08/2072150)

12. DTI White Paper "Meeting the Energy Challenge" (2007)
13. BERR: Renewable Energy Strategy , July 2009
14. EERA: Placing Renewables in the East of England

15. The Stern Review (October 2006)
16. Natural England, "Sustainable Energy Policy", 2008
17. Natural England's Policy on Wind Energy (March 2009)
18. Natural England, The Natural Environment - Adapting to Climate Change, 2008
19. Responding to the impacts of climate change on the natural environment: The Broads, Natural England (March 2009)
20. "Living with Climate Change in the East of England", Summary Report, East of England Sustainable Development Round Table (2003)
21. "Tomorrow's Norfolk, Today's Challenge: A Climate Change Strategy for Norfolk", Norfolk Climate Change Partnership (2009)
22. Scottish Natural Heritage "Guidelines on the Environmental Impacts of Windfarms and Small Scale Hydro Electric Schemes" (2001)
23. The Countryside Agency "Landscape Character Assessment: Guidance for England and Scotland" (2002)
24. The Landscape Institute, Institute of Environmental Management and Assessment 2002 "Guidelines for Landscape and Visual Impact Assessment", Second Edition
25. The Countryside Agency and Scottish Natural Heritage (2002) Landscape Character Assessment Guidance for England and Scotland, Topic Paper 6, Techniques and Criteria for Judging Capacity and Sensitivity
26. Scottish Natural Heritage and The Countryside Agency Landscape Character Assessment Series "Topic Paper 9: Climate change and natural forces – the consequences for landscape character" (2003)
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28. South Norfolk Landscape Assessment - Landscape Character Areas of the Norwich Policy Area, A1 and B1
29. South Norfolk Landscape Assessment - Landscape Character Areas of the Rural Policy Area, prepared by Land Use Consultants (April 2006)
30. South Norfolk District Wind Turbine Landscape Sensitivity Study, prepared for South Norfolk District Council by Land Use

Consultants, April 2006 (updated January 2008)

31. Scottish Natural Heritage, Cumulative Effect of Wind Farms (version 2, April 2005)
32. Visual Representation of Wind farms: Good Practice Guidance, Scottish Natural Heritage (2007)
33. Review of the Landscape and Visual Impact Assessment of the Environment Statement, by Liz Lake Associates
34. Landscape architecture and the challenge of climate change, Landscape Institute (October 2008)
35. Visual Assessment of Windfarms: Best Practice. University of Newcastle. Scottish Natural Heritage Commissioned Report FOlAA303A
36. English Heritage, "Wind Energy and the Historic Environment" (2005)
37. English Heritage, "Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment" (2008)
38. English Heritage, "Climate Change and the Historic Environment" (2008)
39. Consultation paper on a new Planning Policy Statement 15: Planning for the Historic Environment, July 2009

39A. The Countryside Agency and Scottish Natural Heritage, Landscape Character Assessment Guidance for England and Scotland. Topic Paper 5, Understanding Historic Landscape Character

39B. The Parish Churches of the Hempnall Group - booklet by The Hempnall Team Council

39C. English Heritage, "PPS Planning for the Historic Environment: Historic Environment Planning Practice Guide" Living Draft - 24 July 2009

40. ETSU-R-97: The assessment and Rating of Noise from Wind Turbines (September 1996)
41. "Acoustics - Attenuation of sound propagation outdoors: Part 2: General Method of Calculation", ISO 9613-2, International Standards Institution (1996) (Extracts)
42. British Standard 4142: 1997 "Method for Rating Industrial Noise affecting mixed residential and industrial areas" (1997)
43. "Wind Turbine Generator Systems - Part 11: Acoustic Noise Measurement Techniques", IEC 61400-11:2002 2nd Edition (2002) (Extracts)

44. Van den Berg, G.P., "Effects of the Wind Profile at Night on Wind Turbine Sounds", Journal of Sound & Vibration (2003)
45. Department of Business, Enterprise and Regulatory Reform: "Research into aerodynamic modulation of wind turbine noise", report by the University of Salford (July 2007) (Extracts)
46. Government Statement regarding the Findings of the Salford University Report into Aerodynamic Modulation of Wind Turbine Noise Ref: URN 07/1276 (July 2007)
47. Low Frequency Noise and Vibrations Measurement at a Modern Wind Farm, ETSU W/13/00392/REP, 1997 (Executive Summary)
48. Prediction and Assessment of Wind Turbine Noise – Article published in the Institute of Acoustics Bulletin Volume 34 No. 2, March/April 2009
49. Bats and Onshore wind turbines, Natural England Technical Information Note TIN051
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51. "Guidelines for consideration of bats in wind farm projects. EUROBATS Publication Series No. 3", UNEP/EUROBATS Secretariat (2008)

51A. Additional Bat Survey April to July 2009. Baker Shepherd Gillespie report (August 2009)

51B. Proposed Hempnall wind Farm, A Desk Study on Bats. Aurum Ecology Report (April 2007)

52. Officer's Report to the South West area Planning Committee (June 2006)
53. Decision Notice of South Norfolk Council
54. Inspector's Pre-Inquiry Briefing Note (January 2009)

Document 2 Inquiry timetable (final).
Document 3 Statement of Common Ground on Cultural Heritage between Enertrag and the Council.
Document 4 Statement of Common Ground on general matters.
Document 5 Final agreed list of planning conditions (at closing of Inquiry).
Document 6 Inspector's initial comments on working drafts of conditions.
Document 7 Site Visit Itinerary.

Council Documents

Document 8 Council's opening statement.
Document 9 Ms Bolger's Proof of Evidence.
Document 10 Ms Bolger's Appendices.
Document 11 Mr Witham's Proof and Appendices.
Document 12 Mr Edleston's Proof and Appendices.
Document 13 Plan MB Figure 10 showing landscape character areas and topography.
Document 14 Council's adopted guidance note on Assessing the Landscape and Visual Impact of Large Wind Turbine Developments, June 2009.

Document 15 Note submitted at Inspector's request on status of the South Norfolk Landscape Assessment and Guidance note on Assessing the Landscape and Visual Impact of Large Wind Turbine Developments, June 2009.
Document 16 Plan showing areas of proposed hedge removal.
Document 17 Letter dated 7 September 2009 from English Heritage responding to consultation on the appeal scheme.
Document 18 Plan showing Tas River Valley Landscape Character Area superimposed on viewpoints.
Document 19 Extract from Natural England Web site indicating status of National Character Areas.
Document 20 Council's Wind Turbine Landscape Sensitivity Study (final report January 2008).
Document 21 Correspondence with Natural England at Inspector's request – letter dated 12 October 2009 from Council to Natural England and reply dated 23 October 2009 from Natural England.
Document 22 Council's closing statement.

Appellant Documents

Document 23 Mr Hardy's Opening Statement.
Document 24 Mr Stewart's Proof.
Document 25 Mr Stewart's Appendices.
Document 26 Dr Edis's Proof, revised versions submitted with covering letter on 1 September 2009.
Document 27 Dr Edis's Appendices.
Document 28 Dr Edis's Summary Proof.
Document 29 Mr Goodrum's Proof and Appendices.
Document 30 Mr Goodrum's first rebuttal Proof.
Document 31 Mr Goodrum's second rebuttal Proof.
Document 32 Mr Hayes's Proof.
Document 33 Mr Hayes's Appendices.
Document 34 Dr Shepherd's Proof and Appendix.
Document 35 Plan showing application site outlined in red and land under control of Appellant outlined in blue (submitted at the Inspector's request).
Document 36 Extract from the UK Renewable Energy Strategy.
Document 37 Plan showing turbines, and calculations for separation distances from hedgerows in accordance with English Nature's formula.
Document 38 Summary of bat static recording data for the period 7 July 2009 to 8 September 2009 to demonstrate relative merits of turning various combinations of turbines off during hours from dusk until dawn.
Document 39 Calculation sheet for changes in potential impacts on barbastelle and other bat species arising from the change in turbines proposed to be switched off.
Document 40 E-mail from Natural England to Appellant Company concerning bats, dated 23 September 2009.
Document 41 Wind rose diagram for Hempnall.
Document 42 Additional photo, wire frame and montage, submitted at Inspector's request, showing turbines relative to the entrance

path to St Margaret's Church, Hempnall.

Document 43 Plan showing requisite separation distances of turbines from hedgerows.

Document 44 Mr Hardy's Closing Statement.

Parish Councils' and SHOWT's Documents

Document 45 Parish Councils' and SHOWT's opening statement.

Document 46 Mr Haslam's Proof.

Document 47 Mr Stigwood's Proof and Appendices.

Document 48 Mr Stigwood's Appendix E.

Document 49 Mr Hook's Proof.

Document 50 Mr Peck's Proof

Document 51 Assemblage of individual proofs and written statements.

Document 52 File of Appendices.

Document 53 Blimp photographs.

Document 54 Letter from Lycetts to Mr Hodge, dated 9 June 2008 on liability cover relating to horses and wind turbines.

Document 55 Norfolk County Council's Bridle and Cycle Routes Guide.

Document 56 Distribution of Listed Buildings in England – statistics by County.

Document 57 Photograph sheet from a Hayes Mackenzie Partnership report showing positioning of rain gauge adjacent to microphone.

Document 58 Appeal decision for Longbrook Farm, Thurning, Peterbrough, dealing with relationship to horses and bats, together with specification sheet for the turbine proposed in that case.

Document 59 High Court Judgment [2009] EWHC 2287(Admin) 17 September 2009 concerning setting of Listed Buildings.

Document 60 Comparison sheets of predicted turbine noise and measured noise at existing wind turbine sites, dated 1 October 2009.

Document 61 OS Map extract showing areas of Common Access Land and the location of the gallop and exercise areas used by Mr Hodge for horses.

Document 62 Maps of Fritton, Saxlingham Green and Hempnall Conservation Areas.

Document 63 Mr Stigwood's draft noise condition and covering e-mail, dated 26 October 2009

Document 64 Mr Stigwood's rationale for draft noise condition

Document 65 Mr Stigwood's draft excess AM condition

Document 66 Mr Stigwood's rationale for draft excess AM condition

Document 67 Letter dated 5 October 2009 from Lycetts Insurance Brokers to Mr Hodge

Document 68 Ms Douglass's closing statement.

Countess Attlee's Documents

Document 69 Mr Gouriet's opening statement.

Document 70 *Mr Richardson's first Proof.*

Document 71 *Mr Richardson's second Proof.*

Document 72 *Mr Richardson's Summary.*

Document 73 Statement from Mr J Goldsmith as a response to various questions posed relating to bats at this site.

Document	74	Aerial photograph of the turbine fields with turbine positions and Enertrag's proposed safe flight route for bats superimposed.
Document	75	Complete version of Natural England letter to the Council, dated 20 May 2009.
Document	76	Mr Gouriet's e-mail comments on draft condition 15, dated 27 October 2009
Document	77	Natural England's Policy and Guidance Statement on European Protected Species and the Planning Process.
Document	78	HC Judgement in ER-v- Cheshire East Borough Council and Millenium Estates Ltd 2009 EWHC 1227 (Admin).
Document	79	HC Judgement in Regina–v-Cornwall County Council ex parte Jill Hardy QBD COI 4784/1999.
Document	80	Mr Gouriet's closing statement.

Third Party Documents

Document	81	Bundles of third party representations received at application and appeal stage, prior to the opening of the Inquiry.
Document	82	Bundle of third party representations received in response to SEI (circulated to the parties by the Inspector at the Inquiry).
Document	83	Transcript of Mr Moulton's statement to the Inquiry.
Document	84	Transcript of Mr Pointer's statement to the Inquiry.
Document	85	Transcript of Dr J Nolan's statement to the Inquiry.
Document	86	Letter from Mr Krumins, objecting to the proposal.
Document	87	Letter from Mr R Stretton, objecting to the proposal.
Document	88	Letter from Mr Freemantle, Regional Welfare Officer for the British Horse Society.
Document	89	Letter from Norfolk County Council dated 24 September 2009 withdrawing highway objection to the proposal subject to suitable conditions.
Document	90	Letter from Mr and Mrs Taylor objecting to the proposal.
Document	91	Statement to the Inquiry by Richard Bacon MP.
Document	92	Transcript of Cllr Windridge's statement to the Inquiry, with attachments.
Document	93	Transcript of Mr Wright's statement to the Inquiry.
Document	94	Letter from Mr M Battye FRSA objecting to the proposal.
Document	95	Transcript of Mr Willis's statement to the Inquiry on behalf of CPRE.
Document	96	Note from Mr Pilgrim and Ms Turner outlining the methodology for visitor counts at local churches.
Document	97	Letter from the Stamp family, dated 28 September 2009, objecting to the proposal.
Document	98	Letter withdrawing objection from Norwich International Airport.