

**TOWN AND COUNTRY PLANNING ACT 1990
TOWN AND COUNTRY PLANNING (INQUIRIES PROCEDURE)
(ENGLAND) RULES 2000**

**APPEAL BY ENERTRAG UK LIMITED FOLLOWING A REFUSAL OF
PLANNING PERMISSION FOR 8 TURBINES AT A SITE
BETWEEN
LINTON AND GREAT CHESTERFORD**

**Closing Submission (AG/3)
On behalf of
Stop Linton Wind Farm Action Group**

Philip Kolvin QC

LPA REFERENCES:

**UDC - S09/0232/FUL
SCDC - S/0232/09/F**

**PLANNING INSPECTORATE REFERENCE:
APP/W0530/A/09/2108277NWF
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STOP LINTON WIND FARM ACTION GROUP

CLOSING SUBMISSIONS ON MAIN ISSUES

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A. INTRODUCTION

1. The Appellant failed at the very outset of its project to recognize the sensitivity of the location it had chosen. From this most of its subsequent difficulties have flowed.
2. Its failure may be characterized as one of site selection. Its site selection criteria:
 - a. did not include heritage assets at all;
 - b. did not include any landscape or visual impact criteria other than location within designated landscapes.¹
3. It thus took the risks of harm to the character, appearance and setting of heritage assets and to sensitive, but undesigned, landscapes. In this case, the risk materialized. This is because the Appellant chose a site which:
 - (1) lies within 5 km of over 439 listed buildings. Of these, no fewer than 193 lie within 2 km and 253 are within 3km;²
 - (2) within 600m of Linton,³ the only conservation area graded as “outstanding” in South Cambridgeshire; within 2 km of a total of 4 conservation areas;⁴ and within 5 km of a total of 10 conservation areas;⁵
 - (3) straddles two of the three valleys – the Granta and the Cam - specifically noted for their sensitivity within JCA 87;
 - (4) stands on the slopes of the historically important Granta Valley - specifically noted for its smaller scale landscape and increased

¹ See ES Volume 1 para 4.6.

² See ES Appendix F2.

³ ES Vol 1 page 193 Table 8.7.

⁴ Table 8.7 *ibid.*

⁵ Table 8.7 *ibid.*

sensitivity in relation to renewables in *Placing Renewables in the East of England*;⁶ and highly visible from another valley there noted to be of increased sensitivity: the Cam;

(5) lies in an unusually tranquil and peaceful agricultural and recreational area with no through traffic routes.

4. The Appellant accepts, even asserts, that the major landscape and visual impacts occur over a distance of 3 km. Within this distance lies practically the entirety of the historically rich Granta Valley.

5. Inevitably, therefore, there will be unacceptable impacts visually, and on landscape character and heritage assets. These were described in a sensible, straightforward and above all moderate manner in the evidence of Michelle Bolger, which were unshaken in cross-examination. Her conclusions describe significant adverse impacts on:

(1) the landscape character of the Granta Valley;

(2) the Linton, Abingtons and Hadstock conservation areas;

(3) a key viewpoint from Gog Magog Down;

(4) the landscape character of Linton, Hildersham and Balsham cumulatively with the consented Wadlow Farm wind farm.

6. The Appellant has attempted to deflect attention from these obvious impacts through a series of tendentious arguments, which were exposed during the course of the Inquiry. In general, the Inspector is invited to prefer the evidence of Miss Bolger, which was further supported by the evidence of Corrie Newell and Jonathan Billingsley.

7. While the tests for impact on cultural heritage and landscape are distinct, in many cases they concern the same views and in all cases affect members of

⁶ Ove Arup, 2008, for East of England Regional Assembly, CD 35, pages D7 and D26.

the community as they move around their area. It is submitted that, in weighing matters in the planning balance, it is inappropriate to undertake discreet balancing exercises for each impact against the benefit of renewable energy. I.e. it is inappropriate to ask whether the cultural heritage impacts are outweighed by benefits, and then to do the same for landscape impacts and so on. The appropriate course is to place all of the negative impacts on one side of the balance and all of the positive features in the other. For this reason, various of the Appellant's conclusions – e.g. “the heritage impacts are acceptable” demonstrate an erroneous approach.

8. The Action Group is also deeply concerned regarding harm to the recreational value of the rights of way in the area.
9. The Group has also drawn the Inspector's attention to the risk to the important breeding programme at Linton Zoo, which again the Appellant, choosing not to call expert evidence on the matter, has done nothing to assuage.
10. Finally, The Action Group has consistently been concerned regarding impacts on health, and has called an acknowledged independent expert on the subject, whose evidence was not countered by any evidence on health by the Appellant. The health case must be judged on the evidence presented to this Inquiry. If that produces a result different to that in some other Inquiry, that is a function of what is a quasi-judicial process in which the parties present such evidence as they wish to have taken into account and the Inspectorate judges that evidence dispassionately according to its merits.

B. CULTURAL HERITAGE

(i) The correct approach

11. The starting point on cultural heritage is sections 66 and 72 of the Planning (Listed Buildings and Conservation Areas) Act 1990, which require the Inspector to have special regard to the desirability of preserving listed buildings or their setting or any features of special architectural or historic interest which they possess (s 66) and to pay special attention to the desirability of preserving or enhancing the character or appearance of the area (s 72).
12. In interpreting the weight to be given to those tests, the Court of Appeal has held that the statutory protection they afford should be the “first consideration” for the decision-maker, and one entitled to “considerable importance and weight.”⁷
13. The Inspector is therefore invited to have special regard to the desirability of preserving setting, character and appearance, as the statute requires. It is noteworthy that the Government does not believe that the need for renewable energy should be set above heritage protection. Instead, para 11 of PPS22 makes it clear that renewable permissions should only be granted where it can be demonstrated that the objectives of designation of the area will not be compromised by the development, and any significant adverse effects on the qualities for which the area has been designated are clearly outweighed by the environmental, social and economic benefits. This guidance sits compellingly with ss 66 and 72 of the Act, which plainly place special duties on decision-

⁷ The Bath Society v SSE [1991] 1 WLR 1303, 1318H-1319A.

makers with regard to heritage assets,⁸ and do not merely create a presumption as is maintained by the Appellant.⁹

14. The statutory approach to listed buildings and conservation areas is complemented (but not overridden or substituted) by Guidance in PPS5. The Inspector is respectfully pointed to:

- a. Para 7: *“The Government’s overarching aim is that the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations.”*
- b. Para HE1.2 and 1.3 – the general thrust is that solutions which present less or no harm should be sought, and that where conflict between climate change and conservation objectives is unavoidable, benefit and harm should be weighed. Here, because of a failure to carry out a proper site selection process, it cannot be contended that harm is unavoidable.
- c. Para HE9.1 – presumption in favour of conservation of designated heritage assets.
- d. Para HE10.1 – harm to be weighed against benefits: the greater the harm the greater the benefits that will be needed.

(ii) The evidence

15. As Michelle Bolger explained the particular reasons for the series of effects arising here are a) the richness of the heritage resources of the Granta Valley; b) the proximity of the development to those assets; c) the topography, not just that the turbines are arrayed up the slopes of the valley, but the orientation of the valley towards the heritage assets.

⁸ The guidance has received a level of technical, semantic analysis inappropriate to interpretation of policy guidance – it is plainly designed to assist in the interpretation of the statute, not to exclude from consideration impacts on the character, appearance and settings of heritage assets.

⁹ Proof of Mr. Lee-Wright para 9.23.

16. As to a), the historic wealth of the area is well-documented. Michelle Bolger explained that she had never dealt with such a wealth of conservation areas and listed buildings in proximity to a wind farm site. As to b), the Appellant asserts that the primary landscape and visual effects arise within 3 km of the wind farm,¹⁰ the turbines being key characteristics of the landscape within this area.¹¹ This is the area within which the heritage assets relied upon by the Action Group lie. As to c), the development is splayed from within 30 metres of the bottom of the valley to within 10 metres of the top¹² and oriented towards the assets of the Granta Valley. The character of the valley is described in JCA 87:¹³ “*The valleys of the rivers Granta, Rhee and Cam have a contrasting small scale intimacy which is increased by small woods, pasture and wetland vegetation*” The small scale of the valley floor and its natural and heritage features is as relevant to assessment of the effect on the conservation areas and listed buildings in the valley as it is to the effect on the landscape.
17. Further, it is to be noted, as accepted by Dr. Edis,¹⁴ that the historic resources in this case are not hidden behind high walls. They are the visible fabric of the every day life of the local population, for whom these assets have both aesthetic and community value.
18. It also emerged at the Inquiry¹⁵ that the Appellant agrees with the Action Group that the heritage assets under consideration are part of a smaller scale, more intimate landscape. This is liable to render the more discordant the very large scale, modern, moving structures under consideration here, as Michelle Bolger explained.¹⁶
19. It is plain from the Environmental Statement, and was exposed in cross-examination of Dr. Edis, that the Appellant had not considered impact on

¹⁰ See ES Vol. 1 page 106 para 7.2.

¹¹ Goodrum paras 4.2.8 and 4.3.4.

¹² Cross-examination of Mr. Goodrum by SCDC.

¹³ Appendix 6 to Proof of Michelle Bolger.

¹⁴ In cross-examination.

¹⁵ From Mr. Mould’s cross-examination of Michelle Bolger on cultural heritage.

¹⁶ In re-examination.

cultural heritage at the site selection stage. I.e. impact on heritage assets was not one of the site selection criteria. In that respect, the clear advice in *Wind Energy and the Historic Environment*¹⁷ that such impacts should always be considered at the scoping and design stages was flouted, as was the 8th Key Principle in para 1 of PPS22, in that there was not careful consideration of heritage aspects in the way the scheme was located and designed. This was likely to, and did, lead to problems at the environmental assessment stage.

20. The approach in the environmental statement was flawed and erroneous in several respects:
 - a. There was a total lack of visual assessment material, which in a case of this density and proximity of heritage assets was a serious omission. The Appellant refused requests to fly a blimp so that these effects could be better understood, and also refused requests for viewpoints from conservation areas. (A full account of the way it treated the Action Group's requests in relation to selection of viewpoints is set out in the Supplemental Proof of Roger Shaw.¹⁸) This resulted in serious errors of assessment. For example, it was said that only blade tips would be visible when this was not true, for instance in relation to the views of turbines alongside Great Abington Church.¹⁹
 - b. There were glaring factual errors such as placing the Linton Water Tower and Chilford Hall within the urban envelope of Linton when in fact they lie several kilometres outside it.²⁰ Explanation was invited for this. None was forthcoming.
 - c. There was a preposterous assertion that the scheme would have a negligible impact on the conservation areas,²¹ which under the ES

¹⁷ CD 67 page 7.

¹⁸ AG/22.

¹⁹ See ES Vol 1 page 206.

²⁰ See ES Appendix F4.

²¹ See ES Vol 1 pages 210-211.

methodology could only be true if there was no impact at all.²² This is not a conclusion which could be taken seriously, given that the test in section 72 of the Planning (Listed Buildings and Conservation Areas) Act 1990 is concerned with the character and appearance of the conservation area, i.e. how it looks.

- d. The ES conclusion²³ and the non-technical summary²⁴ referred to only 3 significant effects, and thereby simply failed to take account of its own assessment of significant impact on a further 28 Grade 2 listed buildings.²⁵ No explanation was ever given for this bewildering omission. It could only have occurred because the conclusion and non-technical summary were written without regard to, and possibly before, the assessment.
- e. The ES failed even to follow its own methodology for assessment of impacts on cultural heritage assets.²⁶
- f. So far as impact on listed buildings is concerned, the mainstay of the approach was to draw an arbitrarily-circumscribed setting around the building without reference to the nature and scale of the proposed development. Then, in each case, the finding was that the development lies outside the setting. One immediate observation to make about that is that the assessment of setting is an exercise which proceeds in three dimensions rather than on a two dimensional map, as Michelle Bolger stated in evidence.
- g. The legal reasons why this approach is wrong were set out in the Action Group's Opening Submissions, to which the Inspector is respectfully referred.²⁷ The recent PPS5 supports this by making it clear that setting is "*The surroundings in which a heritage asset is experienced. Its extent is*

²² See ES Vol. 1 page 165 Table 8.4.

²³ Vol. 1 page 214 para 8.8.

²⁴ Non-technical summary page 11.

²⁵ See ES Appendix F4.

²⁶ See proof of Michelle Bolger para 6.4.4.

²⁷ AG/2 paras 14-20.

not fixed and may change as the asset and its surroundings evolve.”²⁸ The accompanying *Historic Environment Planning Practice Guide*²⁹ provides further supportive text.

- h. The Appellant’s approach simply ignores that in nearly every case, the turbines appear in the view **towards** the listed building and therefore are in the setting or impact upon it. It also ignores the obvious case, and the extensive material, demonstrating a) that the extent of the setting may vary according to the scale and nature of the development proposed and the extent to which it impinges on the relationship between the development and its surroundings and b) that the concern is as to the impact on the setting and not just whether the development lies within the setting.³⁰ It finally fails to recognize that in dealing with conservation areas, the statutory test³¹ does not refer to the setting but to the character and appearance of the conservation area.

- 21. Dr. Edis’ evidence contained the same basic flaw as the environmental statement in simply omitting reference to the 28 significant effects on Grade 2 buildings, but went even further, forgetting even the 3 significant effects noted in the ES conclusions, and instead concluding that there were **no** significant impacts on historic assets at all³² when the Environmental Statement he relied on found 31 significant effects! It is obviously particularly important that in these realms of professional judgment the evidence of expert witnesses is fair,

²⁸ Annex 2 PPS5.

²⁹ Paras 70, 113-117.

³⁰ See: s 66 Planning (Listed Buildings and Conservation Areas) Act 1990 (“*development which affects a listed building or its setting*”); Conservation Principles (CD 70) para 76 (“*Definition of the setting of a significant place will normally be guided by the extent to which material change within it could affect (enhance or diminish) the place’s significance*”); Hemptnall decision (CD 28ss) para 16 (“*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,*”); see also Historic Environment Planning Practice Guide paras 70 and 113-124 and, historically, PPG15 para 2.17 (“*A proposed high or bulky building might also affect the setting of a listed building some distance away*”).

³¹ S 72 Planning (Listed Buildings and Conservation Areas) Act 1990.

³² Para 6.4.

careful and considered, and regrettably in this, if not other, respects, that cannot be claimed.

22. In Dr. Edis' evidence, he also maintained the untenable line that setting was to be defined without reference to the development proposed.³³ However, in re-examination he performed a volte face and adopted the approach of the Inspector in Hempnall,³⁴ which was to directly contrary effect. Mr. Billingsley correctly, though euphemistically, described this as a "conundrum." In a single stroke Dr. Edis' change of heart invalidated both the environmental statement and the majority of his own case.
23. Dr. Edis also adopted the remarkable stance that there was no significant effect on the setting of the listed building, or on conservation areas, even when the turbines lay in the same view and beyond the heritage asset. This, he said, was because they could be distinguished from it by dint of use of modern materials and a distinct design. This approach is not only untenable but would result in no wind farm ever being refused on heritage grounds. As Mr. Billingsley observed, the same approach could be used to justify an oil refinery on a hill outside a conservation area. Dr. Edis himself accepted that the same argument could apply to pylons or an apartment block.³⁵ As Mr. Billingsley correctly observed, the fact that one can distinguish between the two features is not the same as saying that there is no interrelationship between the two: the question is how they read together.³⁶
24. The issue is not and cannot be whether the viewer would continue to recognize the church as a church and the wind farm as a wind farm. This ignores important factors such as the historical, aesthetic and communal values attaching to the view,³⁷ the spiritual value attaching to the places of

³³ Proof of Dr. Edis para 4.5.

³⁴ CD28SS para 16.

³⁵ Cross examination by Action Group.

³⁶ Cross examination of Mr. Billingsley.

³⁷ See e.g. Conservation Principles (CD 70) page 7 para 5, page 8 para 6, page 27 paras 33-34, page 28 para 35, 39, page 30 para 46, page 31 para 51, 54; page 36 para 66.

worship³⁸ (all the views shown in the Action Group's photographs from churches are from front doors and main paths); visual dominance;³⁹ scale;⁴⁰ intervisibility;⁴¹ the fact that the turbines are moving;⁴² and the unaltered nature of certain settings over long periods of time.⁴³

25. The Inspector is rather invited to make a professional judgment, taking the above matters into account, and also taking account of:
- a. the visual importance of particular buildings in the landscape (e.g. the intervisibility between Little to Great Abington's Church across Repton's Conservation Area landscape and straight into the heart of the development site with turbines on either side of the Great Abington church tower);
 - b. the presence of turbines on the skyline;
 - c. the propensity of the turbines to stand above or dominate some of the more humble buildings in the conservation areas (e.g. the shops and dwellings along the unspoiled Linton High Street close to the development site, or Chapel Terrace where the turbines would appear to be 2.5 times the height of the cottages⁴⁴);
 - d. the prominence of the turbines in places of particular historic significance or resonance (e.g. from the village green in Hadstock where the roads converge at the heart of the village and the rural backdrop is apparent);
 - e. the fact that they would stand out as prominent, alien features in long-established views;
 - f. their proximity;

³⁸ Ibid page 32 para 60.

³⁹ Wind Energy and the Historic Environment (CD 67) page 8.

⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Corrie Newell CN/13A and B.

- g. the presence of the turbines in designed views (e.g. across the Abingtons or from Pampisford Hall);
 - h. the fact that their movement would draw the eye;
 - i. the fact that they would stand above or at least alongside buildings which define conservation areas;
 - j. the fact that in certain important places there would be an array of turbines, e.g. when seen from main entrances and paths of churches;
 - k. the industrial nature of the development which would stand in contrast to the heritage assets under consideration;
 - l. the effect the development would have on the harmonious relationship between buildings and landscape which in some cases has evolved over many decades.
26. The closest effects arise in Linton, whose conservation area is particularly unspoiled and which, despite not being the largest settlement in South Cambridgeshire, has the largest number of listed buildings.⁴⁵ In many parts of it the only sign of modernity is traffic. The richness of its heritage setting is specifically commented upon in the draft Conservation Area Appraisal⁴⁶ The views of the turbine looming above and beyond the buildings in the conservation area would be incongruous and damaging. The 58 word appraisal in the environmental statement⁴⁷ does not represent a serious attempt to assess the impact of this major development. Nor does the lumping together of 73 listed buildings and the inaccurate suggestion that “blade tips are likely to be glimpsed”⁴⁸ buried far away in an appendix that neither Dr. Edis nor his team seem to have discovered when writing their conclusions. The Appellant has failed to appreciate that parts of the High Street are oriented directly

⁴⁵ Corrie Newell para 12.25.

⁴⁶ See e.g. CN/4 paras 3.4 and 3.7.

⁴⁷ Vol 1 page 210.

⁴⁸ Appendix F4.

towards the proposed turbines, which frames the views and would make the turbines the focus. A glimpse at the visual material produced by the Action Group⁴⁹ and Corrie Newell, in default of any by the Appellant, demonstrates the seriousness of the impacts on the conservation area and the listed buildings it contains.

(iii) Conclusion

27. In summary, the valley floor is small scale and replete with heritage assets set against a rural backdrop, and greatly valued by the community. The proximity and scale of the development would be an intrusion on the character of these historic settlements. This is a case in which para 7 of PPS5 has particular resonance: these historic settlements make an important and positive contribution to local character and sense of place. They are particularly cherished locally by a community which has spoken eloquently at this Inquiry: the preservation of their character, appearance and setting is entitled to full weight.

⁴⁹ Action Group photograph 17, albeit that this is lower than the greatest effect – see Newell para 10.27; CN Appendix 13 A and B.

C. LANDSCAPE

28. The Appellant failed to note the increased sensitivity of the Granta and Cam Valleys at the site selection stage, because its site selection criteria simply ignored landscape sensitivities which were not protected by area designations.
29. Regrettably, nor was the sensitivity of the valleys picked up in the Environmental Statement. There were two clear opportunities to do so: both were missed. The Environmental Statement states⁵⁰ that its sensitivity assessments were drawn from the EERA document “*Placing Renewables in the East of England.*”⁵¹ However, it completely failed to appreciate that *Placing Renewables* advised that “*Areas of increased sensitivity within this JCA [87] include the smaller-scale landscapes such as the valleys of the rivers Granta, Rhee and Cam...*”⁵² This reflects the JCA assessment: “*The valleys of the rivers Granta, Rhee and Cam have a contrasting small scale intimacy which is increased by small woods, pasture and wetland vegetation.*”⁵³ It might be noted that by the time the JCA was written, all the “visual detractors” such as the pylons, were already in place.
30. The failure of both the Appellant and its landscape advisors to note these matters has not been explained, but lies at the heart of the problem in this appeal.
31. The omission is particularly surprising, because the Appellant has asserted that the primary landscape effects occur within 3 km⁵⁴ - it should not have been a taxing task to note that the major parts of the Granta Valley lie within that distance, as Mr. Goodrum accepted.⁵⁵ Even without the prompting of JCA

⁵⁰ Vol. 1 page 118.

⁵¹ CD 35.

⁵² Page D26.

⁵³ Appendix 6 to Proof of Michelle Bolger.

⁵⁴ See ES Non-technical Summary para 7.0, proof of Goodrum para 2.1.5.

⁵⁵ In cross-examination.

87, it should have been noted that the intimate, historic landscape of the valley floor is different from the open landscape of the hills.

32. By the time Mr. Goodrum wrote his proof he was aware of the increased sensitivity of the Granta and the Cam, because it had by now been pointed out by the Action Group in its three volume response to the planning application.⁵⁶ However, in his proof he succeeded in failing to note the impact on the small scale Granta Valley, variously air-brushing it altogether,⁵⁷ placing one turbine in the Cam Valley but ignoring the remainder⁵⁸ and claiming that the turbines do not lie within one of the valleys at all!⁵⁹
33. This resulted in an unhelpful debate regarding whether the scheme is in the valley (it lies on the slopes of the valley). But the point, of course, is the impact upon the small scale, intimate valley floor explicitly noted as more sensitive in both JCA and *Placing Renewables*. As to this, Mr. Goodrum advanced the extraordinary proposition that the Granta Valley: “*provides a natural barrier to the spread of landscape effects in that direction, due to the change of landform, and the settlements and vegetation within the valley which form visual barriers.*” As was graphically pointed out in cross-examination, the Granta Valley, which lies at the foot of this development, is not a barrier to the spread of visual effects: it is the receptor of the visual effects.
34. Discussion also centred on whether the environmental statement and the appellant’s planning witness should state whether impacts are beneficial or adverse. Inconsistent approaches were taken. When dealing with landscape impacts, neither the environmental statement nor the witness stated whether the impacts were beneficial or adverse. When dealing with visual impacts, the environmental statement did not but the proof did so state. When dealing with impacts on settlements, the proof described visibility but seemed to make no

⁵⁶ CDs 93-95.

⁵⁷ Para 3.7.17.

⁵⁸ Para 3.7.26.

⁵⁹ Para 4.3.13.

proper assessments assessment of the effects.⁶⁰ None of this is helpful. The job of the environmental statement and the expert is to inform the decision-maker whether the effect is significant and positive or adverse. The job of the decision-maker is to weigh the effects in the balance along with all other material considerations.

35. Again, there was an unhelpful discussion as to the extent of the effect on the character areas. Of course the question for the Inspector is as to the effect on the character of the landscape, not on landscape character areas. For example, it is almost impossible to imagine a single site development which would produce a significant impact on an entire national landscape character area. Rather, character assessments help the decision-maker to understand the character and sensitivity of the landscape. The development control decision is then concerned with the impact of the development on the landscape.
36. As a yet further diversion, great reliance has in this case been placed on the decision in Wadlow. A glance at Wadlow simply reaffirms that each planning decision is to be taken on its merits. Despite its proximity, Wadlow was a different case. As Michelle Bolger clearly demonstrated,⁶¹ that site's relationship with the A11 mirrors this site's relationship with the historic fabric of the Granta Valley. Moreover, that site does not have a close relationship with a high number of historic assets. It is also adjacent to a large agro-storage plant which has just been given planning permission for 60 further silos. The sites are simply not comparable. Planning does not turn on the application of precedents but on the application of statutory controls and planning policy to the planning merits of the individual case. However, were it to turn on precedent, Wadlow would not be the precedent.
37. Another red herring was Mr. Goodrum's original suggestion that climate change was material to the assessment of landscape impacts.⁶² However,

⁶⁰ See Goodrum proof page 55.

⁶¹ Figure F.

⁶² Para 3.9 of proof.

under cross-examination he was compelled to accept that this could not be so, and that climate change goes into the planning balance as a positive reason for granting permission, and not as a factor which reduces the weight attached to landscape impacts.

38. The Action Group would request the Inspector not to be distracted or deflected by these various lines of argument and instead to undertake the essentially practical, professional task of assessing the impact of this development on the landscape.
39. The Inspector is invited to accept, as advised by Miss Bolger, that the landscape surrounding the site has a medium to high sensitivity to wind turbine development, particularly because of its location on the north facing slope of the Granta Valley and overlooking its historic villages, and because of the unusual tranquility and inaccessibility of the area surrounding the site to the west, south and east.
40. Relying only on the visual material produced by the Appellant, it would have appeared that the turbines were to be both located within a larger scale landscape and only seen from within that landscape and within expansive views. However, fortunately, the visual material produced by the Action Group, Miss Bolger, Corrie Newell and Jonathan Billingsley provided a more balanced picture. These further visuals clearly demonstrated that there would be extensive turbine visibility from within the small scale intimate landscape referred to in JCA87 and *Placing Renewables*, the self-same landscape that Mr. Goodrum claimed would be unaffected and would in fact act as a barrier to the spread of the visual effects. However, of course, it is that landscape which would be the receptor, or victim, of this development.
41. The Inspector is invited to accept Miss Bolger's conclusion that the proposal would have a major-moderate impact on the landscape character of the Granta Valley, with intrusive views of the turbines from Linton and the Abingtons. There would also be views across those villages when approaching them from

the north. Further, the proposal would have a moderate adverse impact on views from elevated ground across the Cam Valley, a major-moderate adverse effect on the setting of Hadstock Village and a moderate adverse impact on elevated views from the Ashdon Plateau Farmland LCA. There would also be a major adverse impact on the tranquility of the landscape immediately south, west and east of the site. It is also worth pointing out that the turbines come down the contour lines across the grain of the pylons, which increases their landscape impact.

42. The Appellant has relied on the visual detractors of Camgrain and the pylons. However, it is fair to say that Camgrain does not figure strongly in many of the views in question. It is set down in the landscape and banded to the north following a planning condition to that effect.⁶³ As for the pylons, they are far lower than the turbines (45 m v 125m), do not have a breadth of 90m, and do not move. In most views they are a presence, but do not detract to anything like the degree that the turbines would. Further, this is a case in which it is not justified to add to visual detraction by a greater detraction, given the sensitivity of the valley.
43. So far as viewpoints are concerned, the Appellant found major impacts at the southern edge of Little Linton, the western edge of Hadstock, the track leading to Park Farm, and Rivey Hill, with major –moderate impacts at the northern end of Saffron Walden, Worsted Lodge, Ashdon Mill Trust car park, and B1052 near Hadstock aerodrome control tower.⁶⁴ In the proof, Mr. Goodrum stated that at Park Farm, Ashdon Mill and Rivey Hill Wood these were positive impacts. He did not provide reasons for that assessment, which runs counter to the very definition of “beneficial effects” in the Statement of Common Ground.⁶⁵ Such reasoning as was given orally (e.g. “it is positive because it is not negative”) was unconvincing and inconsistent with the reasons why these viewpoints were considered sensitive in the Environmental

⁶³ AG/5C, appendices to proof of Michael Barnard, appendix 2 condition 7.

⁶⁴ Goodrum proof page 52.

⁶⁵ Section 6.0.

Statement, for instance because the receptors were recreational walkers and residents.⁶⁶ The illogicality of the approach was compounded with oral evidence that the ability to see other beautiful things on a walk would mitigate the impact – which if it were credible would be an argument for siting wind farms in beauty spots. The Inspector is invited to accept that the upshot of a methodological approach which proceeds from an assessment of the sensitivity of a landscape – here a small-scale, historic, rural setting – is likely to be that major effects are negative, as indeed they are here.

44. As to impact on settlements, Mr. Goodrum had simply not carried out a proper assessment of these impacts. However, in cross-examination, when shown the Action Group's photographs 67 (Hadstock) and 70 (Abingtons, though excluding the turbines which would splay to the left of the church tower), he accepted that these were **major adverse impacts**. Had it not been for the Action Group's diligence, these views would not have been before the Inquiry. However, Mr. Goodrum was unable to explain why he had not previously informed the Inspector that he regarded these as major adverse impacts. However, it is agreed that they are, and should be given great weight at this Inquiry.
45. Further, Mr. Goodrum's acceptance:⁶⁷ that Hadstock provided a really pretty, small scale, historic village scene; that the core of Linton had remained basically unchanged for over 150 years; that Great Abington Church was in a little country lane, part of a conservation area and containing rural buildings including thatched buildings, and was part of a parkland set aside from the village; and that Little Abington enjoyed intervisibility with Great Abington across a parkland conservation area, are all material to assessment of the impacts.
46. In assessing landscape and visual impacts, the Inspector is also invited to take into account cumulative impacts with Wadlow. Michelle Bolger's evidence

⁶⁶ Pages 124, 125, 127.

⁶⁷ Cross-examination.

was that there would be significant cumulative effects such that for the residents of Linton, Hildersham, the Abingtons and Balsham when approaching and leaving their homes views in two directions would be dominated by wind turbines. *Placing Renewables* indicated that tolerance of severe-major impacts up to 5 km may be acceptable where there are fewer receptors; that 10 km should be examined in sparsely populated, less sensitive landscapes; but that where there are a greater number of receptors or a higher sensitivity landscape “greater separation distances of 15 km between wind farms should be considered to avoid cumulative impacts on receptors and overwhelming the scale of the landscape.” While of course it is accepted that this is not a development control document, it is fair to point out: a) that the Appellant itself used it as the basis of its sensitivity assessment;⁶⁸ b) that this is an area where there are both a high number of receptors and a more sensitive landscape; and c) the separation is only 40% of the distance indicated in *Placing Renewables*.

47. The Appellant may argue that there is nothing wrong in principle with wind farms being located in high places where the wind resource is best. That is true, but all depends on the circumstances. Here a) the turbines are not along the ridge, with the grain of the contours, but coming down the valley, across the grain, and b) it is not their high location which is so damaging but the relationship with the small, intimate settlements beneath.
48. Furthermore, not only does the proposal straddle two of the three areas noted for increased sensitivity in JCA 87 and *Placing Renewables*, but it lies outside the area of least constraint specified in the latter publication.⁶⁹
49. In summary, the landscape impacts flow from the relationship of this substantial development coming down the contours of the valley and its proximity to a small scale, historic landscape particularly noted for its sensitivity both in JCA 87 and in *Placing Renewables*, its situation in a

⁶⁸ ES Vol 1 page 118.

⁶⁹ CD35 page 46.

generally tranquil and inaccessible landscape, and from its close proximity to the substantial 13 turbine consent at Wadlow.

D. RESIDENTIAL AMENITY

50. The Action Group asks the Inspector to take into account the impact on living conditions at Windpump Cottage (Penn Farm), which would, it is submitted, become an unsatisfactory place to live if the development proceeds.⁷⁰

⁷⁰ Michelle Bolger para 5.4.3.

E. PUBLIC RIGHTS OF WAY

51. The Inquiry has heard compelling evidence from the community of the value placed on the public footpaths and bridleways in the vicinity of this site. This is due not only to its inherent attractiveness, but also to its freedom from roads, and the fact that it lies between historic settlements, allowing a rural interconnection. The multiplicity of well-kept and well-used paths allows a series of circular walks to be undertaken, which is valuable from both a recreational and educational perspective. As it turns out, the hub of these paths is around Catley Park, on the site itself.⁷¹
52. One of the most telling contributions came from Dr. Moreton⁷² of the Ramblers' Association, because this is an organization which is not opposed to wind farms and because he explained that a balanced view needed to be taken. Under cross-examination he explained that a decision had been taken to object to the proposal because:
- It is one of our best areas of landscape
 - We all felt that this was the one place in this part of Cambridgeshire where the siting of a wind turbine development would be most damaging to that aspect of the landscape.
53. Dr. Moreton also referred to the particular prominence of the site in the landscape; the proximity to the very popular Icknield Way and the footpath across the top of the ridge; the fact that the turbines would be visible from both sides of the ridge, over-topping a sky-line which dominates the attractive views from Linton, Great Chesterford and the Abingtons; the fact that the footpaths are part of the Riders' Route for the Icknield Way Path, a regional route which connects the Ridgeway National Trail in Buckinghamshire with

⁷¹ See e.g. the evidence of Mrs. Rossiter.

⁷² AG/10.

the Peddars Way National Trail in Norfolk, and as such is used by incomers as well as residents, a point clearly demonstrated by the Action Group's own survey;⁷³ and the importance of this part of countryside in its proximity to - and ready accessibility for - residents of Cambridge. His evidence, which was conspicuous by its fairness and balance, is entitled to great weight.

54. Michelle Bolger's Appendix 11 demonstrates the network of footpaths and bridleways. Among these are the bridleway running the full length of the eastern boundary of the site and the footpath running south east to north west across the site skirting the ecologically valuable and attractive Hildersham Wood and then onto Abington Park Farm. The vast majority of the tract of land within which these paths run lies within or close to the 1 km radius within which the Appellant accepts the perception would be "*I am in a windfarm.*"⁷⁴ In general, the landscape for sensitive, recreational users will be transformed into one dominated up and down the valley by turbines. Further, there will be a cumulative effect with Wadlow, particularly for walkers using Icknield Way which passes north beyond Linton. Michelle Bolger rightly describes the effect on the visual amenity for users of the footpath network as major adverse.⁷⁵
55. A separate concern is the proximity of turbines to bridleways – 100m, 130m, 150m and 160m for T6, T4, T8 and T2 respectively.⁷⁶ This is 26% - 42% of the distance of 3 x overall height recommended by the British Horse Society. While this is not a statutory requirement, PPS22 Companion Guide suggests that it "*some negotiation should be undertaken*".⁷⁷ Clearly, no negotiation was undertaken here: the minimal separation distance is a function of the Appellant's desire to cram the most turbines possible within the site. The Inquiry has heard from a number of members of the public as to the paucity of

⁷³ Appended to proof of Sue Heathcote, AG/8; further explanation given in AG/21.

⁷⁴ Goodrum para 4.2.5.

⁷⁵ See summary para 18.

⁷⁶ Proof of Michael Barnard AG/5B Appendix 4.

⁷⁷ PPS22 Companion Guide page 172 para 56.

bridleways in the area, and the fact that even experienced horse-riders would give this area a wide berth is a cause for significant concern.

56. A separate, but important, effect for walkers is the impact on views from the Gog Magog Hills. JCA 87⁷⁸ notes that visits to these hills by Cambridge students were described by EM Forster in *The Longest Journey*. These are the closest high ground to Cambridge, and a major strategic, cultural and recreational resource for Cambridge due to their proximity, their historic associations, and the panoramic views available. There is a charitable organization managing the land. It is of great value in the area and to local people. From here, turbines would appear prominently along the ridge, creating a major–moderate adverse impact.⁷⁹
57. In summary, the area of the site is an important, relatively tranquil, green lung for residents of the historic settlements surrounding it to the north, east and west, and for the wider population. It is crossed by trails of regional importance and by valuable bridleways. The installation of this development would have a major adverse effect on the recreational value of the area whether taken alone or cumulatively with the Wadlow development to the north of Linton.

⁷⁸ Michelle Bolger appendix 6 page 3.

⁷⁹ Michelle Bolger para 5.2.9 and MB Figure 1. See also Appellant’s photomontage.

F. LINTON ZOO

58. Linton Zoo is an internationally important resource for the breeding of rare and endangered species, including species which are critically endangered. It currently houses 100 species, nearly all of them rare. It has received national and international recognition for its work in the field. In human terms, it is one of the main tourist attractions in East Anglia and plays an important educational role. The facility is an important centre of excellence, and has represented the life work of the Simmons family, who have built up the zoo over a period of 38 years.
59. Miss Simmons' evidence has not been contested: that animals are more sensitive to noise than humans; that success in breeding endangered species depends on maintaining a stress-free environment, and anything that disturbs that environment puts the whole breeding programme at risk. She has also stated, again without challenge, that she selected the site for its tranquility, and that there is no question of being able to move it should it prove that the development affects the zoo's ability successfully to breed rare and endangered species.
60. She has obtained written support, also uncontested, from Professor Baldwin, a research Professor in Physiology, an expert in the impact of environmental noise on animal physiology.⁸⁰ Professor Baldwin states that 1 km is much too close to avoid the very real potential for psychological, physiological and behavioural harm. She points out that young animals are particularly sensitive to stressors. She states that the aural range and sensitivity of most mammals, and many other creatures, is significantly greater than that of human beings, so that human research studies do not cross-apply. She says, in a passage specifically put to the Appellant and uncontested: *"Quite clearly further research is required to resolve critical aspects concerning the effects of noise from wind turbines of ever increasing size on land based animals and fresh*

⁸⁰ AG/16

water creates. These studies should include the effects of acoustic frequency, intensity and temporal pattern upon mating, habitat, alarm response and nurturing.” She concludes that given the higher sensitivity to noise of animals, unable to escape or mitigate harmful effects, wind developments should be sited further away than would be apposite for humans.

61. Also uncontested was the written material of Professor Dallman, an emerita Professor of Physiology, who has spent her working life studying the effects of stressors on laboratory animals. She expresses acute concern for the success of the breeding programme at the zoo, in the light of the proximity of the development.
62. Quite obviously, it fell to the Appellant demonstrate that there would not be harmful effects on Linton Zoo, or to accept that the risk of harm. Indeed, SCDC’s Scoping Opinion made specific reference to the matter.
63. The witness advanced to deal with the matter was Mr. Hayes, who has a BSc in Electronics and Communication Engineering and is a member of the Institute of Acoustics.
64. Mr. Hayes was frank enough to accept the following in cross-examination:
 - a. He has no qualifications in animal biology.
 - b. He has no experience or expertise in the breeding habits and behaviour of rare animals.
 - c. He would have to defer to the views of Professors Baldwin and Dallman in that regard.
 - d. Enertrag had neither carried out nor commissioned any research on the effect of wind turbine noise on captive breeding rare animals.
 - e. He had found a 1973 article on ring tailed lemurs, but he accepted that the zoo did not have any ring tailed lemurs, and in any event these animals

were not representative of the 100 species held (let alone those that might hereafter be held) at the zoo, not least because each animal has different auditory functions.

f. He did not believe that an article about lemurs was capable of giving assurance that there would be no effects on the animals at the zoo.

g. Given the lack of evidence, for preference and to minimize risk, one would put the wind farm further away.

65. The Appellant's Counsel tried to salvage something from the evidence, adducing for the first time in re-examination the anecdotal evidence that farm animals are wont to shelter under wind turbines. If that had been anything other than a somewhat desultory last ditch attempt to find something to place before the Inquiry, it would have been in a proof of evidence, so that Miss Simmons could consider and take advice upon its relevance and respond to it in the ordinary way. As it was, fortunately, she was able to explain very plainly that the physiology, psychology and behaviour of farm animals is entirely different to wild animals, and that her animals were captive and could not walk away.

66. Miss Simmons was critical of the cavalier approach of the Appellant to the topic. It is plain that the Appellant has not given weight to the zoo's objection. It is one thing to point out that there is a paucity of research on the topic. It is quite another not even to take the opinion of, and call evidence from, a person with some knowledge of animal behaviour or to commission some research on the topic to provide an informed view to the Inquiry.

67. The situation comes down to this. The zoo is an internationally important facility for breeding rare animals, which is important in terms of education and tourism in East Anglia. It has been there nearly 40 years, cannot move and represents the life's work of its operators, who are local residents. The wind farm does not have to go on the proposed site. If it is allowed to do so, there is

a risk to the breeding programme and all that goes with it. The current state of scientific knowledge is unable to disprove the risk, and the Appellant has done literally nothing to advance the state of scientific knowledge or even to bring an expert view to the debate.

68. In those circumstances, the potential harm to Linton Zoo is of itself a sufficient reason for dismissal of the appeal.
69. It is not necessary to invoke the precautionary principle, although to do so would lead to the same result. It is not tolerable that Miss Simmons should be put in the position of having to prove that her animals will be harmed or to be, as she put it, a guinea pig. Rather, as the party wishing to build a substantial industrial use next to this important breeding facility, it is for that party to bring sufficient evidence to show that there will not be harm. If that party – as it claims – cannot do so, then the development should not be permitted to proceed unless and until such clear evidence becomes available.

G. HEALTH

(i) The proper approach

70. The Action Group is deeply concerned as to the health effects of the proposed development. How should the Inspector approach this concern?
71. The Action Group submits that the protection of the health of their members is consistent with the duty to minimize environmental and social impacts of developments in PPS22 Key Principle viii. How should this be approached on the evidence:
72. Two matters are fundamental, not just as a matter of good practice and common sense, but as a matter of law:
- a. the issue of whether there is a risk to health and what measures are necessary to alleviate the risk (whether refusal or a planning condition) must be resolved on the evidence;
 - b. in making a decision, the Inspector must have regard to planning policy. But planning policy cannot pre-determine whether there is a risk to health. That is a matter of evidence.
73. It is necessary to put the matter in that way because the Appellant is likely to rely on a decision made by another inspector. That would be an invalid approach. Even if (which is not the position) the evidence on both sides, cross-examination and submissions had been absolutely identical from case to case, it would still be an invalid approach, because a) the Inquiry system depends on Inspectors making their own, independent decisions on the material presented to them, and b) it would be a denial of justice to this community which is entitled to independent consideration of their case.
74. The Appellant is also likely to urge the Inspector not to depart from ETSU. That again misses the point. The question of whether local people will become

ill is a question of evaluation of risk, not one of application of government policy. The government cannot decree that I am not depressed if I am. Further, the material upon which the case is built is recent and developing, including since 2004 when PPS22 was published.

75. The Appellant tried to characterize this matter as a “burden” on an independent, expert witness Dr. Hanning. No witness bears a burden in a planning inquiry. The “burden” on an expert witness is to provide dispassionate, fair, balanced, expert evidence in accordance with their professional duties to the Inquiry.
76. This was all explored directly both with Mr. Lee-Wright and Mr. Hayes in cross-examination. Both agreed that as a matter of approach health is a material consideration, that any proven risk should be weighed in the planning balance, and that a proven risk does not cease to be proven because of something said or not said in Government policy.
77. The Action Group is, however, content to accept that if a party wishes an Inspector to take a certain course, they ought to produce sufficient evidence to satisfy the Inspector that that is an appropriate course to take. To that extent, therefore, there is a burden.
78. The Action Group therefore seeks a finding on the evidence presented to this Inquiry as to whether there is a material risk to health. If there is, the Action Group submits that it is a matter deserving of very great weight, since the question of health is materially different from damage to amenity, which falls to be weighed against the benefits of the development. The state ought not to authorize a development which risks the health of local residents, particularly where there is no overriding compulsion to site the development in this particular location.

(ii) The starting point

79. As a starting point, the Inspector is asked to consider the fields of expertise of those who have given evidence before him on this issue. Mr. Hayes was frank enough to accept in cross-examination:
- a. That he is an acoustician whose specialism is sound propagation and analysis.
 - b. That he has no clinical qualifications.
 - c. That he is not an expert in sleep.
 - d. That he has no reason to doubt the expertise or credentials of Dr. Hanning in the area of sleep.
 - e. That he could explain noise levels up to and through the bedroom window.
 - f. But that the biological effect of particular sound levels on residents' sleep and therefore their general mental and physical well-being lies within the expertise of Dr. Hanning.
 - g. That while he had gone to considerable care to produce a substantial written rebuttal of the noise evidence of Mr. Stigwood, he had not produced a rebuttal of the evidence of Dr. Hanning at all.
80. A fundamental issue underlying this issue is the concept of arousal. This is disturbance in sleep short of awakening, which causes a range of psychological and biological effects. The levels and duration of noise sufficient to cause arousal are lower than those normally required to awaken the receptor. Mr. Hayes accepted that he had not dealt with arousal at all in his evidence, only awakening. He accepted also that he did not have the expertise to give evidence on the concept of arousal or indeed the levels of noise limits necessary to avoid it.

81. He accepted Dr. Hanning's expertise in this area and that Dr. Hanning had, while he (Mr. Hayes) had not reviewed the extensive international literature on the topic. He also accepted that, given that he did not have Dr. Hanning's clinical experience or expertise, he was not in a position to challenge what Dr. Hanning had to say on the levels required for the protection of human health from arousal.
82. The importance of this is obvious. There is only one expert before the Inquiry on the topic of health. Mr. Hayes is unable to challenge his evidence. Hence, the Inquiry will be invited to accept it. The gravamen of Dr. Hanning's evidence is that an exterior level of 35 dBA externally is necessary for the protection of health.
83. This fundamental point makes further penetration into the evidence strictly unnecessary. However, the Action Group has referred to a significant body of material to justify its approach:
- (iii) The material before the Inquiry
84. The Action Group pointed to six "perspectives" on the issue.
85. *First, Dr. Hanning.* Bringing his own expertise to bear, and following an extensive review of the recent international literature, Dr. Hanning concludes that an exterior level of 35 dBA is necessary to avoid significant harm to health.
86. The Action Group make the following points regarding Dr. Hanning's evidence:
- a. His expertise and credentials on the subject of sleep and health have been accepted by the Appellant and have not been contested in any way.
 - b. There is no other expert in the case. No expert evidence has been called to counter that of Dr. Hanning as to noise limits necessary to protect from risks to health.

- c. Dr. Hanning properly performed his duty as an expert witness, repeatedly referring to his duty to the Inquiry to give dispassionate and neutral advice on the matters falling within his expertise. His evaluation of the international literature was conspicuously fair, in each case pointing to its merits as well as its limitations. As he pointed out, the job of the expert is to draw from conclusions from the totality of the material, not to draw hasty conclusions from the strengths or weaknesses of any particular study. This would be true of all scientific inquiry.
 - d. He made the fundamental point, which has again passed without challenge, that the issue is not just awakening but arousals, which are just as damaging to health and occur at lower levels of noise.
87. Given the glaring omissions in the Appellant's case on the subject of health, the Appellant had an uphill task in cross-examination.
88. The Appellant was really able to do no more than to point out what Dr. Hanning himself had stated in evidence – that individual studies, notwithstanding their merits, had limitations and that there was not a study, such as a randomized control study, producing definitive conclusions. As Dr. Hanning himself volunteered, the questions were rather like those raised by the tobacco industry which had never carried out such studies but criticized others for not having done so. But, of course, the fact that a perfectly conclusive, epidemiologically based, longitudinal study has not been carried out does not prevent a scientist from reaching conclusions after assessing the research evidence which exists and applying his own clinical and scientific experience and judgment to the matter.
89. Dr. Hanning has done precisely that. He has reached a clear conclusion. That conclusion has not been challenged by any countervailing expert evidence from the Appellant. It therefore comes down to this. **The Appellant is inviting the Inspector to come to a different conclusion to that of the only expert in the case.** With the greatest of respect, the Inspector does not have

the expertise to second guess the independent advice of an expert based on the scientific literature.

90. Where there is a genuine contest on the matter, as there has been in other issues in the case, noise being a good example, the Inspector must weigh the evidence he has heard and decide whose evidence he prefers. But that is not the position here. The Inspector has heard fair and objective evidence from a single expert. When that expert states that a particular noise limit is needed to protect people from harm to their sleep and therefore their health, and his independence and expertise have not been challenged, the evidence should be accepted.
91. The Action Group understands that there may be a natural caution in accepting the conclusions of Dr. Hanning since it would involve imposing limits lower than those suggested by ETSU. (An independent reason for taking this course is set out below, based on the duty to minimize and the Appellant's professed ability to meet a lower limit.) However, it would not be an act of heresy to impose a lower limit. It would be a finding on the evidence presented in this case. In a different case, or even a future case here, with expert evidence called on both sides, a different result may arise. That is a function – and a salutary one at that - of the Inquiry process.
92. If the Inspector accepts Dr. Hanning's evidence on the balance of probabilities, that is sufficient basis for the Action Group's case. Consideration of the remaining points on this issue would not be necessary.
93. *Second, the World Health Organisation.* As a result of developing knowledge and understanding, the World Health Organisation reduced its night time noise criterion of 35 dBA LAeq in its WHO Environmental Health Criteria 12 (1980) to 30 dBA LAeq in its Guidelines for Community Noise (1999).⁸¹ It is pertinent that the 1999 Guidelines referred to special attention being given to noise sources in environments with low background levels and to noises

⁸¹ CD73 pages ix and xii.

with low frequency components, and that the nature of the source is related to adverse effects.

94. It is noteworthy that the ETSU limits are taken from the 1980 WHO criterion. However, as stated above, the fact that the working group which composed ETSU has not reconvened to consider the limits in the light of developments is irrelevant to the question of the levels at which health effects are observed.
95. The Appellant's approach to the WHO levels exposes a fallacy in its case. It relies on the absence of a randomized control trial to justify a night time limit of 35 dBA. But ETSU itself is not based on a randomized control trial but on the criterion set by the World Health Organisation in 1980. Therefore, when that organization lowers the criterion which formed the very basis of the ETSU levels, that is a material consideration of great significance.
96. *Third, the Environmental Statement.* It is worth mentioning in passing that the Environmental Statement acknowledged the lowering of the night time noise limit by the WHO⁸² but then failed to measure the predicted noise levels against the lower limit.⁸³
97. *Fourth, Van Den Berg.* The Inquiry has an important paper by Frits Van Den Berg (2009), which itself reviewed the international literature, and which stated (and this is not contested by the Appellant) that for residents wind turbine noise is more annoying than other important noise sources at equivalent levels, and are comparable to shunting yards. He considered that this was as a result of the type of the noise, although visibility appeared correlated to annoyance. In this context, Mr. Hayes accepted that wind farms would be audible at levels below the background noise level. Further, they would be widely visible at residential receptors.

⁸² ES para 11.3.4.

⁸³ Para 11.7.2.

98. *Fifth, the New Zealand level.*⁸⁴ This recently published national level is set at 40 dBA,⁸⁵ 35 dBA in high amenity areas,⁸⁶ and with a penalty of up to 6 dB for special audible characteristics such as amplitude modulation.⁸⁷ It is noteworthy that the level of 40dBA is “based on an internationally accepted indoor sound level of 30dBA”,⁸⁸ i.e. the WHO 1999 level.
99. *Sixth, Mr. Hayes.* In 2007 Mr. Hayes advised the DTI in cases concerning amplitude modulation.⁸⁹ He advised that “*if one takes the guidance within the WHO for the protection against sleep disturbance of 30 dBA and apply a 5 dB correction for the presence of high levels of modulation within the incident noise, then this gives rise to an internal noise criterion of 25 dBA [which] would provide sufficient protection to neighbouring occupants to minimize the risk of disturbance from the modulation of the aerodynamic noise.*”⁹⁰
100. Mr. Hayes explained to the Inquiry that this was removed from the report because the report concerned what should happen when there was a high level of modulation, rather than what should happen generally.
101. What is significant, however, is the recognition of the WHO standard of 30 dBA. Mr. Hayes has not said that he believes that to be an erroneous standard.
102. Further, he specifically described his view as to what should happen when there is not a high degree of amplitude modulation. “*In the absence of high levels of modulation then a level of 38 dbA will reduce levels to an internal level which lies around or below 30 dB LAeq.*”
103. Mr. Hayes has not resiled from any of the views expressed in his report. The reason for removal was not because he thought his own views were wrong.

⁸⁴ New Zealand Standard: Acoustics – Wind Farm Noise, NZS 6808: 2010.

⁸⁵ Para 5.1.3.

⁸⁶ See Para 5.3.1.

⁸⁷ Para 5.4.2.

⁸⁸ Para C5.1.2.

⁸⁹ AG/14.

⁹⁰ Page 43.

They were removed only because the context of the report was dealing with high levels of amplitude modulation.

104. Hence, one can conclude that Mr. Hayes did and does believe that an internal standard of 30 dBA is apt at night, with a further penalty for amplitude modulation. **However, even if this is not the correct conclusion, his view as an acoustician cannot possibly outweigh the views of a health expert – as he himself accepted in cross-examination.**

(iv) Conclusion as to material before the Inquiry

105. The material cited above, and in particular the uncontested evidence of Dr. Hanning, provides compelling justification for the view that a level of 35 dBA externally is a level for wind farms beyond which significant health effects can be anticipated, even in the absence of high degrees of aerodynamic modulation. Indeed, the Inquiry has not been presented with any evidence to the contrary.

(v) The effect of aerodynamic modulation

106. It has not been contested that where there is aerodynamic modulation, this affects the perception of the noise, and that something ought to be done about it.
107. In New Zealand, the solution is to add a penalty of up to 6 dBA, although the Appendix devoted to the topic suggests 5 dBA.⁹¹ The addition of a 5 dBA penalty was also suggested (six times) in Mr. Hayes' draft report to the DTI.⁹²
108. In his evidence in chief, Mr. Hayes stated that there was no condition that could be applied to deal with it. It was somewhat extraordinary that he said that, given that he had said the opposite on oath to a Court in New Zealand.⁹³

⁹¹ Para B3.1.

⁹² Above.

⁹³ Affidavit to Environment Court at Wellington para 35.

In truth, it reflected an obvious anxiety about the prospect of amplitude modulation here. In cross-examination, he was really driven to accept:

- a. That his firm had actually agreed a form of condition, accepted by the Secretary of State, at Swinford.⁹⁴
- b. That he had recommended a form of condition, largely in the form of the 5 dB penalty, in the New Zealand proceedings.
- c. That he had similar recommended a 5dB penalty to the DTI.

109. A 5dB penalty is the most practical solution, because it does not need to await a scheme which may or may not be successful. It is far more apt to protect the public while the developer tries to eradicate the problem.

(vi) Is there a risk of amplitude modulation here?

110. The clear answer to that question is obviously yes.

111. In the final version of Hayes McKenzie's DTI report "*The Measurement of Low Frequency Noise at Three UK Wind Farms*",⁹⁵ the report set out risk factors for high levels of amplitude modulation.⁹⁶ Mr. Hayes confirmed that the following risk factors from the report all apply here:

- a. Stable atmospheric conditions occur.
- b. Tall wind turbines are proposed.
- c. High levels of wind shear exist at the site.
- d. Sites on the Eastern side of England.
- e. (Relatively) level site.

⁹⁴ CD28rr.

⁹⁵ CD75.

⁹⁶ Page 65.

112. To that, the Action Group adds that the positioning of the turbines in linear arrays is apt to enhance the risk of amplitude modulation.⁹⁷ Further, the Inspector will recall that Enertrag, when objecting to a wind farm proposal in North Pickenham, complained at the separation distance of the proposed turbines to each other, stating: **“There is a significant possibility that amplitude modulation could occur giving major noise issues.”** The separation for which Enertrag argued there was 6-7 rotor diameters in the predominant wind direction. The actual separation distances here are significantly less than Enertrag’s own stated spacing requirements. The spacings are set out in Messrs. Barnard’s⁹⁸ and Stigwood’s⁹⁹ proofs, are identical to within a metre, and have never been contested.
113. The Action Group stresses that it is content that if these risk factors do not materialize, there should be no further consequence for the developer. However, the planning decision needs to cater for the eventuality that they do materialize and excess amplitude modulation occurs.

(vii) What should the Inspector do?

114. As a result of the above, it is respectfully submitted that the Inspector should:
- a. Set a limit for night time noise of 38dBA to protect the health of residents. NB this is 3 dBA above the level recommended by Dr. Hanning, and so there is an element of compromise here.
 - b. Set a penalty of 5 dBA for excess amplitude modulation.
115. It must be stressed that the limit of 38 dBA represents a very significant concession against the evidence of Dr. Hanning, which was that a limit of 35 dBA should be set.

116. Is this workable?

⁹⁷ Stigwood para 4.14.

⁹⁸ AG/5B para 11.

⁹⁹ Para 4.9.

117. This is clearly workable. Mr. Hayes' Table 4(b)(i) and 4(b)(ii) shows that the very few exceedences would be a fraction of a decibel, and is a worst case analysis (because it assumes hard ground, down wind propagation and an exaggerated estimated of the sound power level of the turbines). If one takes him at his word, then the development may operate within the limit at night. There is no reason, therefore, why it should not be conditioned to do so.
118. As to amplitude modulation, all parties accept that if there is a risk (and there is) then some mechanism should be implemented to deal with it. If the risk does not materialize, the condition does not apply. The Inspector is requested to bear in mind that the 5 dBA penalty would only apply if amplitude modulation is experienced over and above the intrinsic quantum of amplitude modulation referred to in ETSU. This is the result of the definition of excess amplitude modulation in Note 5 of the Noise Planning Condition. It is logical that if amplitude modulation is experienced going beyond that anticipated by ETSU then there should be a condition in place to mitigate its effects.

(viii)The duty to minimise

119. There is a further reason to impose the limits discussed above.
120. Key Principle viii in PPS 22 imposes a duty on developers to demonstrate how environmental and social impacts have been minimized through careful consideration of location, scale, design and other measures.
121. Mr. Hayes agreed that this had not been done. Rather, he had been presented with a location, scale and design, and he had demonstrated that it complied with ETSU. In his view, compliance with ETSU sufficed.
122. However, it is clear that the duty to minimize is a free-standing duty. In the context of noise, that is not surprising. The setting of the ETSU limits is expressly intended to balance the amenity of neighbours against promotion of wind energy. I.e. neighbours are asked to accept incursions on the enjoyment of their properties. In those circumstances, it is not unreasonable, and PPS22

requires, that developers should not only comply with standards but actually set out to minimize harm amongst other things through careful consideration of location, scale and design.

123. That there is a separate duty to minimize is confirmed by the Secretary of State's decision in Berwick-upon-Tweed.¹⁰⁰
124. It is not unreasonable that, where human health is at stake, there is clear expert evidence that it will be violated at beyond 35 dBA, and the developer says that it can keep levels below 38 dBA, that the developer should be required to do so. Otherwise, it is affording the developer a luxury he says he does not need at the expense of the health of the local community. That would be bad planning and a blow to a community which is deservedly anxious about the matter.

(ix) Conclusion

125. In conclusion, a) there is an evidenced health risk, b) it can be ameliorated by the imposition of conditions, c) the developer says that it can comply with the conditions, d) there is a duty to minimize impacts. In such circumstances, the Inspector is invited to take the course sought by the Action Group.

¹⁰⁰ AG/12 para 15; AG/13 page 51 para 334.

H. THE GENERAL NOISE CASE

126. The debate on the general noise case has been conducted on a level which has largely served to exclude participation in the debate from those unable to afford the service of experts. The Inspector will have to weigh up the respective evidence of Messrs. Hayes and Stigwood and decide whose evidence he prefers. It is not black and white, and he may prefer the evidence of one on some issues and the other on others.
127. Irrespective of that debate, however, the Action Group makes the following brief observations:
- a. Mr. Hayes' table 3(a) shows exceedences at Crave Hall, even when 2 dB is removed to account for his calculation on the basis of LAeq rather than LA90. He was given the clearest opportunity to correct this in evidence, but this table remained his evidence to the inquiry.
 - b. The selection of correct measurement locations is crucial to the exercise. (This can be shown from the spread of readings obtained by Mr. Stigwood at Crave Hall as between an exposed place near trees and in a quiet area next to a swimming pool actually used as the regular amenity area and actually requested to be used by the occupier.¹⁰¹) Here, there are question marks over some of the background measurements, including in particular that at Chalky Road.
 - c. A debate arose on late-introduced graphs from Mr. Stigwood, during which Mr. Hayes explained that the exceedences shown by Mr. Stigwood would only arise for a proportion of the year. That would be true for any ETSU exceedences – e.g. they would not apply during still conditions - and is a false approach. It is utterly unfair on residents for them to know that, when the wind blows in a certain direction under certain wind shear

¹⁰¹ Stigwood page 53.

conditions, they will experience noise levels above those considered acceptable by ETSU, when even those levels are the product of compromise to benefit the wind industry.

- d. The issue of amplitude modulation requires to be resolved during amenity hours as well as at night. Mr. Hayes explained the issue arises from sunset, which is during amenity hours.

I. CONCLUSION: KEY PRINCIPLES

128. The conclusions in this case cascade from an application of the key principles in PPS22.

129. The first key principle in PPS22 is that

*Renewable energy developments should be capable of being accommodated throughout England in locations where the technology is viable and environmental, economic, and social impacts can be addressed satisfactorily.*¹⁰²

130. As has been accepted by the Appellant,¹⁰³ performance against energy targets is not material. What is material is that the nation's energy needs should be met on sites where environmental impacts can be addressed satisfactorily, and conversely not on sites where they can not be addressed satisfactorily. (However, were it material, it would be pertinent to note that Cambridgeshire is by far the best performing county in the best performing region in the country¹⁰⁴ and that the region's targets are achievable.¹⁰⁵)

131. The most critical factor in addressing impacts satisfactorily is site selection. Other factors might be turbine size and numbers, but in this case the Appellant has selected among the largest turbines on the market and tried to fit as many on site as it can. It has failed to provide any design iterations to show how impact might have been minimized. Therefore, through its own actions, site selection is the critical factor.

132. However, in the very exercise of site selection the Appellant succeeded in overlooking the sensitivities of the surroundings in landscape and cultural

¹⁰² Para 1(1).

¹⁰³ Proof of Lee-Wright para 7.7.

¹⁰⁴ Cross-examination of Mike Barnard, and proofs paras 16-24.

¹⁰⁵ SCDC cross-examination of Lee-Wright.

heritage terms. No amount of sophisticated conceptual argument has protected the Appellant from scrutiny and recognition of that fatal flaw.

133. Complementing the first key principle is the eighth, that

“Development proposals should demonstrate any environmental, economic and social benefits as well as how any environmental and social impacts have been minimized through careful consideration of location, scale, design and other measures.”

(Emphasis added)

134. In breach of that principle:

- a. **The location** of the site was poor. It is a small, thin site which comes down the contours, faces into a heritage rich valley and is crossed and /or surrounded by an important network of footpaths and bridleways. The Appellant has eschewed all opportunity, even with extensive prompting, to explain what alternatives were considered and why they were rejected.¹⁰⁶
- b. **the scale of the proposal** in terms of size and number of turbines has not been such as to minimize impacts. The design iterations produced show that the Appellant started with a wholly unrealistic proposal involving 5 turbines on objectors’ land and butting up against overhead power lines, and the other 5 on the appeal site). When it became clear that that was not feasible, the Appellant tried to cram 8 turbines into this small appeal site to maximize its returns. That cramming has caused additional difficulties with proximity to bridleways, amplitude modulation and the debate regarding ecology. The Appellant has never explained why it is necessary to have 125m high turbines, and the lack of visual material with which to assess cultural heritage effects demonstrates that it was really unconcerned as to the impact of tall turbines on neighbouring historic settlements;

¹⁰⁶ See Mike Barnard proof paras 29-31.

- c. **Design:** again the number, scale and separation of turbines have simply compounded the problem of the site's location, in particular through the inadequate separation between the turbines and between the turbines and site boundaries and footpaths/bridleways.
135. Principally, however, the location of the site was not carefully considered with reference to landscape and cultural heritage impacts, and was not such as to minimize such impacts. The Appellant chose an area of land straddling two of the three areas noted for their increased sensitivity in JCA 87 and in *Placing Renewables*. If the key principles are to have any real meaning, then when the location has not been carefully chosen, environmental impacts have consequently not been minimized but exacerbated, and those impacts are significant, many and various, the right course is to refuse permission.
136. Further impacts have been identified with regard to the important conservation facility at Linton Zoo, rights of way and (at one home) residential amenity.
137. Impacts have also been identified in relation to health. Given that the Appellant asserts that it can operate without breaching the levels to which the expert evidence points, it is accepted that this can be resolved through the use of conditions. Such levels should also be set in the light of the duty to minimise social and environmental impacts.
138. Finally, the Appellant may urge the temporary nature of the impacts, if a quarter of a century can be characterized as such. The Action Group is content to quote the Secretary of State in the recent Toft Hill decision:¹⁰⁷ *“Given the very considerable life-span of the schemes, the Secretary of State does not consider that the reversibility of the schemes is a matter which weighs in their favour.”*
139. The Inspector is respectfully requested to dismiss this appeal.

¹⁰⁷ AG/12 para 20.

PHILIP KOLVIN QC

15th September 2010