



# Appeal Decision

Inquiry held on 7-9 January, 13-16 January, 19-23 January and 9 and 10 February 2009

Site visits made on 11 and 12 February 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:  
16 March 2009

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## Appeal Ref: APP/X2220/A/08/2071880

### Land west of Enifer Downs Farm and east of Archers Court Road and Little Pineham Farm, Langdon.

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a failure to give notice within the prescribed period of a decision on an application for planning permission.
- The appeal is by Ecotricity Group Ltd against Dover District Council.
- The application, Ref DOV/07/01148, is dated 15 August 2007.
- The proposal is for wind energy development comprising: erection of up to 5 wind turbines (maximum height 120m), together with access tracks, hardstanding areas, electricity sub-station and temporary construction compound.

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### Application for costs

At the Inquiry an application for costs was made by Dover District Council against the Appellant. This application is the subject of a separate Decision.

### Decision:

I dismiss the appeal and refuse planning permission for the development applied for.

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### Procedural and administrative matters

1. As originally submitted, the application was accompanied by an Environmental Statement (ES) prepared under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999.
2. After the appeal was lodged, the Council resolved, at the meeting of its Planning Committee on 5 June 2008, that it would have refused planning permission for the following reasons:
  - (i) In the absence of the provision of further information required by the Local Planning Authority under Regulation 19 of The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999, as set out in the draft report dated 18 April 2008 by Ramboll Whitbybird, in respect of site selection, highways and transport, ecology, grid connections, landscape and visual impact, cultural heritage and tourism and socioeconomics, the Local Planning Authority, does not have sufficient environmental information to fully assess the impact of the proposed development.

- (ii) In the absence of information requested by the Local Planning Authority as set out in the letters dated 20 December 2007 and 19 February 2008, the Local Planning Authority are unable to fully and properly consider the merits and the impact of the proposed development.
3. It had first been held that this appeal would fall jointly to the Secretaries of State for Communities and Local Government (DCLG) and for Business, Enterprise and Regulatory Reform (BERR) to determine. A Pre-Inquiry Meeting (PIM) was held on Monday 3 November 2008 at which reference was made by the parties to the submission of Supplementary Environmental Information (SEI) provided by the Appellant and dated Thursday 30 October 2008. This incorporated some of the details which the Council's June 2008 Committee resolution had identified as being absent, and also included an appraisal of a scheme for 4 turbines. Following objections from the Council and other Rule 6 parties about the timing and content of this SEI, I ruled that I would invite the Secretaries of State to consider the option of permitting four turbines, rather than five, as a potential amendment to the application proffered by the Appellant, adding that I would also consider, and invite the Secretaries of State to consider, the additional environmental information that accompanied the 4 turbine option in determining the planning application. Following clarification of the Appellant Company's status, the appeal was subsequently transferred to me for my own determination. Further Environmental Information, relating specifically to wind shear, was submitted in December 2008.
4. The statement of Common Ground accordingly asserts (among other things) that the planning application before me consists of the following:
- Planning application forms dated 15 August 2007;
  - Environmental Statement (September 2007), including particularly the "application drawings", namely figures 4.1 (existing site plan), 4.2 (proposed site plan), 4.3 (elevational drawing of turbine), 4.4 (turbine foundations), 4.5 (substation), 4.6 (turbine colour scheme), and 4.6 (daylight/night marking).
  - Environmental Statement Technical Appendices (September 2007);
  - Environmental Statement Non Technical Summary (September 2007);
  - Environmental Statement Supplementary Information (October 2007);
  - Design and access statement (September 2007);
  - Planning statement (September 2007);
  - Statement of Community Involvement (September 2007);
  - Flood risk assessment (October 2007);
  - Supplementary Environmental Information (30 October 2008);
  - Supplementary Environmental Information (December 2008);
5. In answer to my questions, the Appellant advised that the turbine drawings and details are of a potential candidate turbine, and that the drawings of the sub-station are of a typical building. Within the parameters set by the

- application description and the Environmental Statement (ES) and Supplementary Environmental Information (SEI), I have therefore regarded those details as being for illustrative purposes only. The Statement of Common Ground further affirms that only temporary permission is sought for the construction compound, which would not remain in situ once the turbines have been commissioned and begun generating electricity. The turbines themselves, together with their foundations and associated crane pads, internal access tracks, substation and grid connection are proposed to endure for 25 years.
6. At my request, a site plan was submitted incorporating all of the land within the Appellant's ownership or control outlined in blue (Inquiry Document 50). I have taken this as an additional application plan rather than as a replacement of figure 4.1 as the red line area on it does not identify the site of the proposed substation.
  7. The Council's resolved reasons for refusal allege only an insufficiency of Environmental Information and thus raise potential rather than actual objections to the scheme itself. Those alleged deficiencies are numerous and wide ranging, the 20 December 2007 letter referred to in reason 2 extending to seven pages and the letter of 18 February 2008 to nineteen pages. It is implicit from section 10 of the PIM minutes and my subsequent ruling (on the 4 turbine scheme), that I saw no compelling reason to require anything more than the 30 October 2008 SEI to be submitted. That approach did not, however, preclude a finding, on the basis of the evidence and submissions to the Inquiry, that further information could, in the event, be necessary. Indeed, my ruling refers to paragraph 112 of Circular 2/99, which affirms that if a developer fails to provide sufficient information to complete an ES, the application can be determined only by refusal.
  8. Nonetheless, Circular 2/99 cautions against the use of regulation 19 powers to obtain other than the minimum information about environmental effects consistent with compliance with the Regulations, adding that such powers should not be used simply to obtain clarification or non-substantial information. Paragraph 11 of the Planning and Climate Change Supplement to PPS1 similarly militates against requiring excessively detailed information. Both the October 2008 and December 2008 SEI were subjected to publicity procedures in accordance with the Regulations and, in my judgement, they satisfy (together with the original ES) the definition of an Environmental Statement in Regulation 2. Nonetheless, throughout the Inquiry, the Council and Parish Councils maintained the stance that the Environmental Information was inadequate to satisfy the Regulations, despite the Council's planning witness conceding in cross-examination that the evidence to the Inquiry had provided sufficient detail for me to satisfactorily determine the application. Closing submissions covered the subject in some detail, that from LAG referring in particular to the judgement of Sullivan J in *Blewett-v-Derbyshire County Council* [2003] EWHC 2775. In the light of that judgment, I find nothing that might have caused me to be other than satisfied with the Environmental Statement or the scope and content of the Environmental Information now before me, and I have taken it all (ES, SEI and evidence) into account in determining this appeal.
  9. It is also necessary to make clear at the outset my approach to the 4 turbine scheme introduced in the October 2008 SEI. In essence, I do not regard this as a separate proposal from the five turbine scheme (effectively with two

applications running in parallel on which two separate decisions are required). Nor do I regard it as a revision to the 5 turbine scheme in the sense that only the four turbine scheme now stands to be considered. Instead, as indicated in the notes to my post PIM ruling, and as requested by the Appellant, I consider the proposal before me as a five turbine scheme and, should that be unacceptable, consider whether a condition limiting the scheme to four turbines (by excluding turbine T1) would overcome the objections to 5 turbines. With the agreement of the parties, and in order to avoid any risk of confusion between the number of turbines proposed and the number that might be permitted, I have above included the words "up to" five turbines in the banner heading description of the proposal.

### **The main issues**

10. Largely in consequence of the additional detail provided in the October 2008 SEI, dispute at the Inquiry centred on a more limited range of matters than had been raised at the PIM. Partly for that reason, the timetabling of the Inquiry was arranged to include a small number of topic-based sessions covering landscape, aviation, noise and policy interests. Other evidence was heard more traditionally on a sequential basis, and included cultural heritage, highways and a range of amenity considerations relevant to "places of habitation" (homes, workplaces, schools and places of worship). A great many representations were also made in writing, including two letters of support passed to me at the Inquiry. I have taken all of these into account but, in the interests of brevity, my reasoning focuses only on what I consider to be the principal important and controversial issues<sup>1</sup>. These broadly concern strategic principles and questions of development control detail, and I categorise them accordingly. Having heard all of the evidence, read all of the third party representations and inspected the site and its surroundings, it seems to me that that the main issues in this case are:

#### *Strategic principles:*

1. Quantitative considerations
2. The approach to alternatives
3. The suitability of the local landscape to accommodate wind turbine development
4. The impact on aviation interests

#### *Detailed development control matters:*

5. The extent to which the proposed turbines would bear directly upon the environment and amenities enjoyed by local people who would experience the effects of their presence most closely, with particular regard to noise, flicker and visual impact; and
6. The effect of the proposal on cultural heritage interests, including locations of acknowledged scenic attraction.

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<sup>1</sup> South Bucks DC-v-Porter (No2)[2004]UKHL33

11. During the course of processing the application, the site has become known as the "North Dover" wind farm site and I refer to it in shorthand accordingly.

**Strategic principles:**

***Issue 1: Quantitative considerations***

12. Paragraph 2 of PPS22 "Renewable Energy" requires Regional Spatial Strategies to include targets for renewable energy *capacity*. These are to be derived from assessments of the region's renewable energy resource potential, taking into account the regional environmental, economic and social impacts (either positive or negative) that may result from exploitation of that resource potential.
13. Such targets are different from *generation* targets, which are more widely referred to in National and International obligations as a measure for promoting increases in the proportion of energy derived from renewable resources. Those targets are reflected, for example, in the Government's aim of producing 20% of UK electricity requirements from renewable sources by 2020. The achievement of such targets is dependent upon a wide range of variables. These include intervening rates of population and household growth, changes in the rate of replacement of energy inefficient appliances with energy efficient ones (such as low energy lighting, washing machines and refrigerators), increases in usage of powered appliances in general (such as computers) and the effect of improved standards of home and workplace heating and insulation.
14. Both types of target share the common purpose of tackling climate change. However, *capacity* targets are the more relevant of the two to the spatial planning process because they involve direct comparison of factors (regional capacity and capacity of the technology to generate) that can be firmly established at the outset and accurately monitored as the target date approaches. Importantly, it would plainly be wrong to seek to derogate renewables technologies by introducing input data for generation into a target for capacity, or vice-versa, because the two are entirely different measures.
15. As paragraph 3 of PPS22 advises, spatial planning targets should be expressed as the minimum amount of installed *capacity* (used in this sense to refer to the manufacturer's warranted or "rated" energy output), reviewed on a regular basis, and revised upwards if they are met, subject to further *capacity* (used in this sense to refer to environmental, economic and social capacity) being identifiable. The Planning and Climate Change Supplement to Planning Policy Statement 1 (PPS1) elaborates upon this advice and, at paragraph 20, further makes clear that applicants should not be required to demonstrate either the overall need for renewable energy or why a proposal for such development must be sited in a particular location.
16. In essence, it is thus for each region to determine its own minimum capacity for renewables, and there is no compelling requirement in PPS22 for any one region to meet a pre-set proportion of UK generation needs. It would be both surprising and inexpedient for a Region to promote a minimum capacity figure in statutory development plan policy without having first established that such capacity exists, normally through a "bottom-up" rather than a "top-down" analysis involving at least a measure of consultation with the constituent

Counties and/or Districts. Only on-shore capacity is to be counted, not just in recognition of the extent of Local Authority administrative boundaries but also because, no matter how close the turbines are to a particular coastline, it may be the case that the energy will be brought ashore in a different administrative area or Principality. Off-shore generation is thus counted as a contribution to National generation targets, but not to regional capacity (or planning) targets. For the purposes of North Dover, however, a key point is that capacity assessment by planning authorities, rather than case-by-case assessment of individual planning applications, is intended to underpin quantitative and broad distributional considerations at regional (and, it follows, sub-regional) level.

17. In this particular case, approved Regional Spatial Strategy (RPG9 2004 Alterations) policy INF7 establishes indicative capacity targets in Kent (for all on-shore renewables, not solely wind) of 111MW by 2010 and 154MW by 2016. These figures are proposed to be retained in policy NRM14 emerging RSS (the South East Plan). The adopted Kent and Medway Structure Plan (SP) will shortly be superseded by the South East Plan, but it does affirm that the majority of Kent's contribution to renewables is likely to come from wind (paragraph 9.25) and further refines this by suggesting (in paragraph 9.26) that 100MW of its 2016 target could come from one large wind farm (more than 50MW), five small clusters of 4-10 turbines (6MW), six large turbines and 30 small single wind turbines.
18. From the evidence to the Inquiry, I am far from certain that either Regional or sub-Regional capacity has yet been assessed with the assiduity such precise figures suggest. As matters currently stand, however, installed capacity (all Kent on-shore renewables) amounts to 129.11MW including the recently completed Little Cheney Court "large" wind farm (60MW). While some additional "clusters" are in the pipeline (including North Dover), none can yet be regarded as "commitments". As far as resource capacity is concerned, the presence of a gliding club at nearby Waldershare Park, an airstrip at Inglenook Farm and the remains of several windmills (including Swingate Mill and the mill at South Foreland) attest to the relative windiness of this part of Kent, which is undisputed. Even if permitted now, it is unlikely that North Dover would be completed in time to be counted within the 2010 target period. I find no reason to doubt that its quantitative contribution towards the 2016 target would be both beneficial and welcome and that this part of Kent has a wind resource that could usefully be exploited in meeting or exceeding statutory development plan indicative capacity targets.

***Issue 2: The approach to alternatives***

19. Clause 4 of Part II of Schedule 4 to the Town and Country Planning (Environmental Impact Assessment)(England and Wales) Regulations 1999 effectively requires an applicant for EIA development to include in the Environmental Statement an outline of the main alternatives studied and an indication of the main reasons for the choice, taking into account the environmental effects. Paragraph 83 of Circular 02/99, however, affirms that this does not amount to a requirement for a developer to actively look for alternatives (alternative sites, choice of process and phasing of construction), but only to record the environmental merits of practicable alternatives where such alternatives have been considered.

20. The approach to site selection is the subject matter of Chapter 3 of the ES. Among other things, this indicates the range of criteria employed in the initial search for sites and the reasons for focusing on the North Dover site. While various of those reasons are open to dispute (such as the criterion that turbines should not, typically, be closer than 400 m to dwellings), it seems to me that the relevant guidance in Circular 02/99 has been followed and I do not find it necessary, or desirable, to delve further into the subject of alternative sites.
21. Moreover, as PPS22 advises, 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. There is thus no need to rank sites in any particular order of preference or to fear that the "best" site might be sacrificed to development of a lesser site or sites. Rather, it is the nature of wind energy development that, subject to there being no harmful cumulative impact (which is not the case here) an assemblage of suitable sites (whether "best" or "satisfactory") should be utilised. This is because the contribution of wind to energy supplies derives from a large number of relatively small installations (compared to traditional power stations on which the country has traditionally relied for the bulk of its electricity supplies) spread across a wide range of locations (which can compensate for day-to-day localised variations in wind speed) and embedded close to sources of demand (so that losses through transmission are minimised). Any contribution from North Dover (even if the site was found not to be the *best* in the district or County but nonetheless *satisfactory*), would thus be beneficial not only for quantitative reasons and reasons of sustainability, but also in terms of continuity, diversity and security of supply, and distributional efficiency.

***Issue 3: The suitability of the local landscape to accommodate wind turbine development.***

22. There is a wealth of evidence before me disputing the capacity of the landscape to satisfactorily accommodate proposed turbines in the number and size proposed. This includes the oral, documentary and photographic submissions from the Council's, Appellant's and LAG's own professional landscape witnesses, a landscape impact assessment of the proposal made on behalf of the County Council in January 2008 and the 17 photomontages, 25 additional montages and further "wirelines" included in the Environmental Statement and Supplementary Environmental Information. I deal here only general principles of landscape strategy and reserve more detailed consideration of the evidence for the specific points raised by issues 4 and 5.
23. In effect, the site lies a little less than 4 km inland from the Channel coast, on the gentle northern "back slope" of the Kent Downs and towards the higher end of one of the several dry valleys that incise this chalky land form on an approximate north-east/south west alignment. These shallow valleys lend the landscape hereabouts a gently rolling character and it is the dramatically exposed flanks of some of them where they border the coast that create the part of the famous White Cliffs that progressively decline in height from Dover north-eastwards towards Kingsdown. When viewed from the coast to the south east, the rolling landscape separating the solidly urban areas of Dover and St Margaret's is seen across the tops of the valleys and thus appears

mainly flat, expansive and very open, with large scale arable fields interspersed increasingly to the west of A258 with blocks of woodland and stretches of hedgerows. The valleys themselves, however, are of markedly different character. Much of the network of rural lanes passing through them is sunken and tree lined and they hide a number of small settlements often of historic character and all of profoundly rural quality.

24. In landscape policy terms, the coastal margin, traced by the Saxon Shore Way long distance footpath and extending inland to Upper Road, is part of the White Cliffs area of designated Heritage Coast. The South Foreland section of the Kent Downs Area of Outstanding Natural Beauty also extends further inland to the alignment of the A258 Dover to Walmer Road, typically a little less than 2 km from the appeal site. The main part of the Kent Downs AONB, however, lies some way off to the south west of Dover and both parts exclude the appeal site, which falls within an area carrying the SP policy EN5 local landscape designation of Special Landscape Area. Whereas Planning Policy Guidance Note 7 "*Sustainable Development in Rural Areas*" (PPS7) makes clear that AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and natural beauty, it cautions that local landscape designations should be maintained or extended only where necessary to ensure that particular characteristics of the landscape are respected. It is not intended that this SP designation excludes development altogether, or that the designation be retained in the South East Plan, and I therefore attach only limited significance to it. Policies CO1 and CO5 in the Dover District Local Plan 2002 (LP) both recognise that certain types of development inherently require rural locations, the latter policy applying only to development on the Heritage Coast, not close to it. In these circumstances, I find no landscape policy in the statutory or emerging development plan of sufficient weight to militate against the principle of wind farm development taking place at the North Dover site.
25. The Council also acknowledges that "*the most suitable types of landscape for wind turbine development are typically expansive and open, with few receptors, no archaeological influences and some visual detractors*". There is some resonance between that and the Appellant's assessment that "*between the broad horizons and the rolling contours, the turbines would be a relatively small feature at 2 km distance or more*". It is also not far removed from the County Council's 2008 assessment which remarks, for example, that "*when viewed from within the South Foreland part of the AONB, the turbines would be a relatively small element in a much wider view. The clean and simple design of the turbines also mitigates their intrusive effects. There are also other visual detractors such as masts, pylons and overhead power lines either within the AONB or near to the wind farm so that views from the AONB towards the turbines cannot be regarded as completely unspoilt.*" The County's assessment concludes, among other things, that the overall character of the AONB would not be significantly affected, and that the scale of the landscape is more able to accommodate these features than a small scale intimate landscape. Natural England has not objected on landscape grounds.
26. From my own inspection of the area, I have come to much the same verdict on the widest compass of views from inside and outside the AONB including,



for example, VP13<sup>2</sup>, VP14, A9<sup>3</sup>, A21, A22 and A24. The proposed turbines would be more significant features in a range of views towards the horizon taken from closer to the site, such as VP10, VP12 and A12. I saw that these montages generally have the turbines as the central focus of a single angle of view, whereas in reality the eye would rove over a much greater number of features both nearer to and further off and in a much wider range of directions. In this broad context the turbines would still not in my judgement represent such a dominant feature that appreciation of the local countryside in general for its intrinsic character and beauty or the greater diversity of its landscape character, would be seriously compromised. I further observed that within the small intimate landscape of the valleys themselves, the contours and the vegetation lining large parts of the local network of rural lanes, and within the settlements, would in many places mask the turbines completely, or almost completely, from sight. I accept therefore that the landscape has capacity to absorb a cluster of turbines, but in doing so I make two qualifications. The first is that, in some localised areas, there are particular properties or parts of settlements in which the turbines would be fully exposed or only partly masked from view. In these places, the relationship between the height and spread of the proposed turbines and their proximity to places of habitation of much smaller scale, as well as to sites and buildings of historical significance, requires particularly careful scrutiny. The second is that in certain of the long distance views, where the turbines would be seen above the skyline, the sensitivity of both the viewpoint and viewer warrant particular attention. I refer to the latter as "locations of acknowledged scenic attraction". Both are subjects that I return to in my consideration of issues 5 and 6.

***Issue 4: Impact on aviation interests.***

27. Paragraph 25 of PPS22 says of wind farms that "It is the responsibility of developers to address any potential impacts, taking account of Civil Aviation Authority, Ministry of Defence and Department for Transport guidance in relation to radar and aviation, and the legislative requirements on separation distances, before planning applications are submitted". There was discussion at the Inquiry over whether "addressed" in the context of paragraph 25 of PPS22 means "resolved". I remark only that "addressed" is the word used in PPS22, but both words can accommodate situations in which safety concerns are either met, or are recognised as not capable of being met. This is why I regard aviation interests as a factor bearing on the principle of what is being proposed rather than simply, for later, as a development control detail. "Addressing" through early consultation also gives CAA an opportunity to offer technical advice to the parties, if requested, in the event of dispute and before positions become entrenched in a planning application.
28. Two objectors appeared at the Inquiry to raise aviation matters, the first concerning Kent International Airport (KIA) and the second concerning the Inglebrook Farm airfield. The nature of concerns raised by each is different (the first being concerned with technical effects and the second with physical effects), so I deal with them in sequence. At the outset I record that the planning process is concerned with regulating the use and development of

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<sup>2</sup> VP = Photomontage Viewpoints, taken from October 2008, replacing those in ES.

<sup>3</sup> A= Additional Viewpoints, taken from SEI October 2008.

land in the public interest and not with the protection of the commercial interests of one organisation or individual against the legitimate business activities of another.

29. I am aware, for example, that the 2003 Airport White Paper *"The Future of Air Transport"* signalled the valuable role that KIA could play in contributing to regional economic development and urged that this be recognised in regional and local planning frameworks. SP policy TP24 and policy T9 in the emerging South East Plan accordingly acknowledge the potential of KIA to develop into a regional airport and become one of the largest single generators of economic activity within the County.
30. However, having ambitions for substantial growth (as expressed in KIA's 2008 draft master plan) is not the same as having certainty that such growth will, in practice, occur. Much will inevitably depend on choices made by others, for example with regard to the future development of London, Gatwick and Stanstead airports, the degree of competition from Lydd airport and actual rates of growth in overall demand for air travel and transport. Indeed, although KIA has undisputed spare capacity, it starts from a relatively low base with passenger numbers amounting to just 16,000 last year (mainly seasonal charters and weekly services) and 625 freight aircraft movements (or roughly two per day). There is no suggestion that KIA's growth could not materialise if 5 wind turbines were constructed at North Dover, the economic argument before me being that their presence would make additional aircraft operators more difficult, but not impossible, to attract. Against the importance attached by the Government to tackling climate change, and the relative certainty that turbines would be installed at North Dover if planning permission is granted, I do not therefore regard KIA's own development aspirations to be, in spatial planning terms, an overriding public interest.
31. Likewise, while there may be a case for requiring a wind farm operator to pay for, or contribute towards, radar or other airport improvements the need for which is directly attributable to proposed turbines, it would be wrong for airport operators to resist turbine development solely in the expectation of securing a contribution towards improvements that cannot be so attributed. In the event, no such contribution was explicitly sought or offered at the Inquiry. Given all of these circumstances, my reasoning is focussed solely on the question of air safety, which is governed by a range of statutory guidance, including the "Rules of the Air" (SI 1996 No. 1393) and other CAA published guidance, rather than by spatial policies in the statutory development plan.

#### *KIA*

32. Air traffic control (ATC) at KIA extends over a radius of 25 nautical miles (nm). Above 6,500 feet the airspace hereabouts is largely available only to commercial and military aircraft (including, for example, passenger aircraft inward and outward bound from the main London airports). It is "controlled" airspace (class A), meaning that all aircraft entering it must have ATC clearance, fly by instruments and comply with ATC instructions. The relevant ATC in this upper air space is London, not KIA. Below 6,500 feet the airspace is "uncontrolled" (class G), effectively meaning that it is open to all air traffic with or without radar contact or instrumentation. However, ATC at KIA is equipped to provide a "lower airspace radar service" (LARS) within the 25 nm

radius, and is thus able not only to guide the landing and departure of commercial flights below 6,500 feet to and from the airport but also, in the general interests of air safety, to offer a range of radar and other services and advice to any other airspace users with whom it is in contact. This includes advice about the presence of air traffic which displays on radar but is not in contact with ATC.

33. Of significance to both "upper" and "lower" airspace is a navigation beacon (Dover VOR) located 2.3 km east of the application site. The beacon provides important navigational data to support air traffic services in transit as well as instrument controlled departures and arrivals at airports as far away as Heathrow, Bournemouth and Luton. There is no dispute that wind turbines can adversely affect the operation of such beacons and a scheme has already been agreed with NATS to mitigate this. Its implementation can be secured by planning conditions.
34. However, KIA's concerns extend further than interference with the beacon's navigation systems alone. This is because the beacon also represents the main transfer point between upper and lower airspace for commercial aircraft departing from and arriving at KIA, as well as serving effectively as a signpost and control point for private aircraft crossing the channel to and from the continent by the normally preferred shortest sea route. Also operating within this sector of KIA's lower airspace are occasional coastguard and rescue helicopters in transit along the coast, "sight seeing" traffic along the White Cliffs themselves, aircraft using the Inglenook airstrip, and gliders from Waldershare Park. Even though the KIA runway is aligned roughly east-west, a very high proportion of ATC activity thus arises from movement in close proximity to the beacon which, like the North Dover site, lies about 20 km south of the airport. It is for this reason that KIA contends that the location of the proposed turbines, relative to the airport ATC systems and main areas of flight activity, "could not be worse".
35. The effects of the presence of the proposed turbines on KIA radar surveillance would be to present a similar "paint" on the screen to moving aircraft, and to de-sensitize the screen image in the area around the turbines. It is speed of movement that distinguishes turbines from other fixed or slower moving "paints", such as the Church Hougham television mast or ships in the English Channel. Because radar does not, by itself, distinguish between the height of objects above ground level, this speed of movement of the turbines even over only a couple of degrees of the radar sweep could, for example, become confused with a light aircraft (such as those using Inglenook airfield, which might enter the de-sensitized area from one direction and, as they curve away or towards the airstrip, leave in another), or obscure gliders rising in thermals above North Dover. For safety reasons, aircraft adopting flight information (in any form) from KIA would thus either have to be directed (or "vectored") away from North Dover to avoid the turbines by at least the requisite 5 nautical miles separation distance, or cautioned and left to fly by sight across the turbine site. KIA says that it would be impossible to adopt the first of these measures for commercial flights, not least because such flights are deposited almost unannounced from upper airspace, with the normal approach path to the KIA runway being via the Dover VOR beacon, and that commercial pilots would not be content with the alternative of operating under

reduced radar service close to the beacon. The additional "clutter" of the turbines on the radar screen would, it is argued, also be likely to unduly absorb the ATC operator's attention and thus risk diminishing the quantity and quality of flight information that ATC is currently able to give to all aircraft in contact (commercial and private) elsewhere.

36. In disputing these points, the Appellant refers, among other things, to the ability of experienced ATC operators to differentiate between radar paints of turbines and aircraft, proposals for the future use of transponders, the short periods of time during which aircraft crossing North Dover would be out of radar "sight" (particularly if only four turbines are permitted), and the presence of other air traffic in the uncontrolled lower air space area which currently flies without instrument control or ATC advice yet does so safely. In this latter respect, I observe that the overall amount of air traffic seeking information from KIA is low (but I was also told that there is considerable "bunching" during popular flying times) and I understand that KIA is not currently operating LARS due to a shortage of controllers. I further note that aircraft are already vectored around areas of bad weather, and may be vectored around or advised to fly by sight through existing glider and light aircraft traffic over North Dover whether the turbines are there or not. Circumstances here are also not directly comparable with the Elsham wind farm appeal, to which KIA refers.
37. Equally, however, circumstances are not directly comparable with other airports to which my attention was drawn, where wind farms in some number have been absorbed into flight operations and ATC has been satisfactorily maintained. At those airports mitigation has either been put in place or the turbines are not in such critical airspace. Both of these points would variously seem to apply at KIA itself, to the Kentish Flats, Thanet and Little Cheyne Court Wind Farms. For North Dover, however, although it would be open to KIA to seek designation of protected airspace once flights exceed a particular number, there is no certainty when that will be. Nor do I regard the presence of existing hazards to air safety in the area to be a sound justification for permitting more. A suggestion that KIA could be notified by telephone when gliders are airborne has not been manifested in the form of any agreement with Waldershare Park or others and, according to KIA, adherence to it could not be relied upon in any event.
38. Significantly, in originally commenting on the application, CAA affirmed that responsibility for aerodrome safeguarding rests in this case fundamentally with the aerodrome operator (KIA). Similar advice was re-iterated in its letter of 18 December 2008 referring to 4 turbines, which concludes by saying "*the LARS service received from KIA is an important aspect of overall safety in this area and any degradation in the existing service or constraint on the future expansion of the service may need mitigating.*" That does not amount to an objection, but it is certainly not a ringing endorsement of the Appellant's approach either. Nor can it be interpreted as giving planning clearance. Conversely, CAP764 stresses the importance of early and continuing dialogue between airport operators and wind energy developers, while paragraph 96 of the PPS22 Companion Guide makes clear that the onus of proof to show that a wind farm will not unacceptably affect aviation interests (including safety) lies with the developer. On the balance of air safety evidence before me, I

prefer that of the KIA ATC operator who, unlike the Appellant's witness, has specific expertise in the control of air traffic and "hands on" experience of its operation in this particular part of Kent. The key points of his evidence are that, contrary to CAP764 advice, there has been no meaningful engagement by or with the developer to address KIA safety fears, and that "avoidance" is not a practicable mitigation option in this particular case because of the significance of the nearby navigation Dover VOR beacon and the focus of aviation activity attracted around it. The unambiguous view of ATC is that the safety of commercial flights into and out of KIA would be compromised and that there would be a degradation of the LARS service that KIA has been commissioned to provide, the maintenance or enhancement of which the CAA regards as important for air safety reasons.

### *Inglenook*

39. This airstrip lies to the north of the proposed turbines and, according to the ES, at a distance of about 2,020 m from the nearest turbine (measured from the runway midpoint). The ES also indicates that the approach to and from the airstrip from the west/southwest currently passes across the turbine field between proposed turbines T2, T3 and T4. Two alternative flight paths have been suggested by the Appellant, but these would involve flying above developed areas at less than 1,500 feet, which is not permitted by the Rules of the Air. The airfield operator has suggested instead a route slightly to the south of East Langdon, which omission of turbine T1 would facilitate.
40. CAA advice on the subject of turbulence is also relevant here. Its CAP764 publication indicates that, given normal requirements for minimum separation and avoidance of obstacles, turbulence does not normally require additional consideration, but acknowledges that there may be some local variations. While the ES points to Rule 5 of the Rules of the Air (which effectively specifies minimum separation of aircraft from buildings of 1,500 feet vertically and 600 m horizontally), I am also conscious of the advice in CAP428 which cautions against obstacles greater than 150 feet within 2000 m of the runway mid point. In this case, not only does the airfield operator suggest that the nearest turbine (T2) to the runway would (contrary to the ES figure) be slightly closer than 2000m, but the turbine blade tips would also be some 460 feet higher than the runway. Even with T1 omitted and with take-off and landing on an alignment south of East Langdon I am not therefore convinced that the Rules of the Air separation distances could be maintained relative to T2. While (for obvious reasons) those separation distances are not intended to apply during take off and landing, it seems to me that they remain especially pertinent during approach and departure manoeuvres in terms of potential turbulence effects on the types of light aircraft that might use Inglenook. I find some support for this stance in the CAA letter of 18 December 2008. It says that the effects of wind turbulence on aircraft are not yet known, so it is impossible to draw any firm conclusions, but points out that disturbed air is likely to return to free flow within 10 rotor diameters (820 m) or 20 rotor diameters in the worst case (1.64km). CAA accordingly cautions that, when the wind is from the south or southwest, aircraft landing or taking off from the airstrip would therefore be very likely to pass through the disturbed air down wind of the turbines. Notwithstanding the contents of the brief 2007 exchange of e-mails between the airfield operator and the

Appellant's aviation consultant, in order to remove any possible risk of danger it thus seems to me that measures might also need to be introduced to enable aircraft to avoid turbulence effects from turbine 2, even if not 3, 4 and 5.

41. I acknowledge that the airstrip is "not a major operation" and that there would be a strong case for holding that development needed in the public interest should not be thwarted by it. Nonetheless, while the airstrip exists, the safety of its users is paramount. Again, CAA urge caution rather than unconditional support and recommended dialogue with the airfield operator does not appear to have been pursued in earnest (inasmuch as the Appellant's own flight path suggestions would contravene statutory clearances above developed areas, precise runway length remains open to dispute and turbulence effects have been only superficially considered). In consequence, safety concerns relating to turbulence, in particular, remain unresolved to the extent that I am not fully convinced that they can be satisfactorily overcome.

**Detailed development control matters:**

***Issue 5: Effects on the environment and amenities enjoyed by local people***

42. The appeal site lies in an area of open countryside around which stand the settlements of West Langdon (about 1.2 km to the north of the nearest turbine), East Langdon (about 700 m to the east of the nearest turbine), Guston, about 1km from the nearest turbine) and Pineham (typically about 600m from the nearest turbine). The nearest individual properties to turbines include Enifer Downs farmhouse (360 m from turbine 5), Little Pineham Farm (430 m from turbine 4), and Langdon Court (479 m from turbine 1). None of the turbines would be more than 570 m from a dwelling. In all, the Parish Councils estimate there to be 100 dwellings within 820 m of any one turbine, reducing to 23 if turbine T1 is excluded. SP policy NR5 has a particular focus on avoiding or mitigating pollution impacts from development arising from, for example, noise, diminished levels of tranquillity and light intrusion. SP policy QL1 and LP policy DD1 extend general development control considerations safeguarding against un-neighbourly development to visual impact in its widest sense.
43. Separation distance is not, in itself, a decisive factor in judging policy compliance or the associated standards of environmental quality, but it provides a broad context for consideration of amenity impacts in this particular case which I find notable for proposing turbines of the size proposed as close neighbours to places of habitation. As I indicated both orally and in writing to the parties at the Inquiry, noise, light flicker and visual intrusion are in my estimation the three factors with greatest potential to affect local amenity. Each warrants careful examination, and I accordingly consider them in turn. In doing so, I am aware that Enifer Downs farmhouse exists with the benefit of only temporary permission, on expiry of which it will be expunged unless the viability of the farmholding to which it is attached has been demonstrated to the Council's satisfaction. At the time of my inspection, the enterprise seemed to be physically well established and while having no knowledge of its functional or financial viability I saw no reason to attach less importance to the living conditions of its occupiers than at any other dwelling in the vicinity.

*Noise*

44. Paragraph 22 of PPS22 affirms that ETSU-R-97 should be used to assess and rate noise from wind energy development. In practice this establishes a four stage process.
45. The first stage is to measure prevailing background noise levels during day and night time periods. ETSU-R-97 recognises that, in many cases, it would be impracticable to undertake background noise levels at every property that might be exposed to turbine noise and recommends that measurements are therefore taken at a sample of representative properties. These are not always the closest properties to the turbines but are expected to be the ones where the noise environment, once the turbines are operational, is likely to be most affected.
46. The second stage is to use those measurements to generate maximum permissible day-and night-time noise levels. These are set at a prescribed margin above background level – normally 5 dB(A) (or, in low noise environments, at recommended fixed levels). This margin recognises that a balance needs to be struck between the impact of turbine noise and the need to ensure satisfactory living conditions for those who might be exposed to it. Since the margin is prescribed in ETSU-R-97, the required levels that emerge from this stage of the process are thus entirely dependent upon the results of the background noise measurements.
47. The third stage is to predict the likely noise emissions from the turbines at each of the representative properties. This is normally achieved by validating turbine manufacturers' warranted outputs against local anemometric data (such as wind speed) and other site specific environmental conditions (such as topography). The purpose of this stage is to provide the turbine operators and local people with assurance, before the turbines are purchased or installed, that they will actually be capable of operating within the pre-established noise limits. They do not affect the noise limits themselves, or limit turbine noise in operation, but are produced solely for comparison with the background noise measurements. The outcome of that comparison does, however, influence turbine choice and contribute to ensuring, at site planning stage, that there will be adequate separation distances from places of habitation.
48. The fourth and final stage is to draft planning conditions requiring that the pre-established noise levels are not breached. Provided the third stage noise predictions prove robust (and that turbine choice and separation distances have been suitably fixed), there is no reason to believe that these noise levels would be breached. Indeed, experience throughout England is that they very rarely are.
49. Significantly, however, in the event of a wind farm neighbour complaining that a noise condition has been breached, the generally accepted form of condition requires the validity of that complaint to be assessed by comparing the actual level of noise exposure at the property concerned with background noise level measured at stage 1 at the nearest representative property. Not only is the original background measurement therefore important in itself, but so is the selection of representative properties. This is because inadequacy in either respect can result in the specified noise levels being set too high, expose

significantly more than the representative properties alone to excess turbine noise, and frustrate the enforcement of noise limits that are intended to safeguard against greater than 5dB(A) above actual background levels at any neighbouring property. It is in that context that I view the submission that in over 250 wind farm proposals, neither predictions of turbine noise nor noise limits established by the Appellant's noise consultant have been exceeded, because all are predicated on the validity of the initial measurements of background noise.

50. Given these factors, it is clearly important that stage one of the process is carried out fastidiously. Background measurement is not straightforward - ETSU-R-97 devotes 39 pages to the subject in Section 6 and gives further advice in 10 pages of Section 8 (in the form of supplementary guidance notes to a suggested model form of planning Obligation). Among its salient recommendations are that agreement should be reached with the planning authority/EHO on the identification and number of properties at which background noise levels are to be measured and the precise location at those properties where the measurements should actually be taken. It also includes advice on the type of equipment to be used and on methodology.
51. In the event, the representative properties, the precise locations for standing the monitoring equipment and the selection of the measurement apparatus for the ES were all chosen unilaterally by the Appellant's noise expert. However, such choices inevitably rely upon some degree of compromise to take account of the layout and usage of the property involved, the significance of any sounds that may affect noise meter readings, and aural privacy considerations during the actual process of mensuration. Although the measurements were taken with the agreement of the building occupiers concerned, the evidence suggests that this was not secured in the light of their having any understanding of ETSU-R-97 processes or, at the time, any access to independent informed explanation of the significance of the outcomes for safeguarding their own noise environment or that of their neighbours.
52. In order to correct acknowledged errors, three suites of amendments have been made to the baseline data since the September 2007 ES (in the October 2008 SEI, the December 2008 SEI and the Appellant's rebuttal evidence) and although one of the measurement positions was changed, again LPA agreement neither to that nor any of the others was sought or obtained. I note the Appellant's noise expert's assertion that the various corrections do not indicate that the original ES outcomes were in any way corrupted, and I accept that the Appellant's noise expert is well acquainted with ETSU-R-97 guidance and has considerable experience in the selection of suitable measurement points. However, both the Council's and LAG's own noise experts have identified factors that, at least, open the results to question. These include, for example, the appropriateness of the selected "representative" locations (such as that at Hart Cottage as being representative of the noise environment at West Langdon) and the suitability of the precise microphone positions (such as at Langdon Court). Added to these are further disagreements over the validity of causative assumptions made about increases in measured noise levels that coincide with morning and evening peak travel hours, the effect of wind direction and the degree of accuracy that can be attached to the "best fit" curves for the various data sets taken at each measurement location.



53. The point here is not solely one of whether criticisms of the actual data that has been recorded are justly made. Indeed, my own visual and aural assessment of the Appellant's selected measurement points did not disclose any undue preference for locations that were, for example, over-exposed to traffic noise from A2. The Council's noise expert also wryly observed at the Inquiry that the results of any two sets of background measurements taken, for example, by the same person using the same equipment at the same location and over the same time span, but on different dates, would in all likelihood vary from each other. It is clear that this is not a precise science.
54. Rather, my first concern is that the process of background noise measurement in this case cannot be said to have been undertaken in either an open or fair manner. When carried out on the basis of the Appellant's own unilateral choices there will always be a lingering doubt, whether unfounded or not, that the outcomes have been manipulated in such a way as to maximise rather than minimise the scope for turbine noise to be judged acceptable. There can be no question that if steps had been taken to secure necessary consensus at the outset on where and how data was to be collected and analysed (as ETSU-R-97 suggests), the measurements would have yielded demonstrably more robust results, even if those results had thereby been found to be no different. Given the importance of background noise levels to the overall process, it seems to me that the only way in which robust levels can now be established to allow the subsequent stages of setting noise limits, predicting turbine noise and formulating suitable safeguarding conditions to be undertaken with confidence (actual and perceived) would be through revalidation on a consensual basis, with further measurements taken fully in line with ETSU-R-97 advice. This is a subject that I return to later, in my overall conclusions.
55. My second (and related) concern is that, given the imprecision inherent in the process of background noise limits in general, some of the third stage noise predictions fail to demonstrate sufficient cushion to fill me with confidence that the margin above background noise determined during the first two stages would not, in practice (or if re-worked on a consensual basis), be exceeded. Indeed, the Appellant's own predictions show that the noise environment at Little Pineham Farm (night-time), Langdon Court (daytime) and Enifer Downs Farm (night-time) would exceed ETSU-R-97 guidance with 5 turbines and that Little Pineham Farm (night-time) would be exposed to excess noise even with only 4 turbines. The predictions also show that the noise environment would variously be either at or only just below the required levels at all three properties during other times, or even with one or more turbines temporarily shut down or operating at reduced power ("mitigation"). Notably, these three properties are, among the five representative background monitoring points, all the closest to turbines, and turbines T3 and T4 are closest to Little Pineham Farm, not T1 (which is the only one proffered for omission in the 4 turbine option). Conversely, the risk of levels being exceeded is shown to fall rapidly away at the other two (St Margaret's Farm and Hart Cottage), which are just over 1 km away from the nearest turbines to them.
56. This amply demonstrates the veracity of PPG24 "*Noise*" advice that the best form of noise mitigation is separation between noise generating and noise sensitive development. "Mitigation" (other than by separation distance) should not, in my judgement, be deployed in this case as a device to provide scope for

the Appellant to site turbines closer to places of habitation than would otherwise be acceptable, because the safety margins at the three “representative” properties concerned are of such small order, even after allowing for the manufacturer’s recommended “safety factors” for various uncertainties. Those “safety factors” cannot be relied on with confidence when the predictions are based on a “candidate turbine”, which may not be the model employed in practice. Moreover, although commenting in the context of day-time limits within the range of 35-40dB(A), ETSU-R-97 says that *“the more dwellings there are in the vicinity of a wind farm, the tighter the limits should be as the total environmental impact will be greater”*. Clearly in this case, if the present noise predictions proved to be inaccurate by only a relatively tiny amount, a greater number of properties within, say, the 500 m – 1 km range could also be at risk of exposure to excess noise with fewer, if any, further post-installation remedial mitigation options remaining available.

57. Nor is it, in my estimation, sufficient in this particular case (where the margins are as tight as currently predicted) to rely solely upon planning conditions to deal with excess noise exposure should it occur. Such conditions have become increasingly refined with the passage of time since ETSU-R-97 guidance (which promoted their expression in planning Obligations) was published. However, if breaches are alleged, investigation and remediation can still be a lengthy and complex process, not least because of the need to wait for climatic conditions (notably wind speed and direction) at the time of complaint to be replicated and with sufficient forewarning to ensure that the requisite measurement equipment is at hand. The time taken to then investigate and agree potential causes and to assess the effectiveness of practicable solutions must also be added. Clearly, the greater the number of properties close by, the greater will be the potential number both of complaints fed through the Council and needing to be investigated, and of occupiers exposed to excess noise while those investigations are in train. All this in the face of a natural reluctance by the Appellant to forego electricity generation or incur the cost of turbine modification or replacement without clearly demonstrable reason.
58. I am also aware of criticisms that ETSU-R-97 does not adequately deal with the full range of noise emissions from wind turbines of similar size to those involved in this case, the blades of which penetrate the atmosphere at higher levels than smaller “first generation” turbines. This applies particularly to excess amplitude modulation and low frequency noise. Amplitude modulation (widely known as “blade swish”) occurs during the downward sweep of the blades. Its regular pulsing is generally unexceptional, not least because its audibility diminishes rapidly with rising wind speed. However, there can be occasions when the turbines rotate at a greater velocity than measured wind speed would suggest, with the consequence that swish is not masked to the degree expected and can, allegedly, also be accompanied by other noises such as an unusually loud “thump”. Low frequency noise was described to me at the Inquiry as similar to the deep throbbing noise heard from the sound system of a passing car, but at the very threshold of audibility. Some people are, I understand, more sensitive to this kind of noise than others and, once woken by it, find return to sleep difficult. Both have been the subject of Government sponsored research and post-PPS22 statements concerning them have been issued. These indicate that complaints have been wrongly attributed to low frequency noise, that excess amplitude modulation is still being investigated at

only one property and that no further work on either amplitude modulation or low frequency noise is proposed or justified at this time. There nevertheless remains on-going dispute between objectors to, and promoters of, wind farm development over the significance of both types of noise and how excess amplitude modulation might be caused, with agreement only that any likelihood of its occurrence cannot be predicted.

59. Any alleged or actual shortcomings of ETSU-R-97 in these or other respects are matters for wider review than is appropriate in the consideration of an individual planning application. Reference was, however, made to one case in which allegedly “unpredicted” noise is claimed by a wind farm neighbour to have been so disturbing as to have caused the dwelling concerned to be vacated. The parties were also aware of a small number of other cases where allegations of excess amplitude modulation continue to be investigated. In debating planning conditions, I expressed the view that even a small risk of similar disturbance occurring should be safeguarded against in this particular case because there are so many more properties in much closer proximity at North Dover. To the extent necessary to allay local fears, I see nothing in Circular 11/95 to prevent the imposition of planning conditions in such circumstances and this is an approach from which the Appellant did not demur (albeit on the basis that the risk of such noise being encountered was so small that it could be discounted). I also do not see the imposition of such a condition as being at odds with either of the Government’s two post-PPS22 statements, and it is entirely consistent with the advice in paragraphs 10 and 11 of PPS24. Having accordingly invited the parties to consider whether appropriately worded conditions could be formulated, however, I am left in no doubt from the intricacies of noise measurement involved that, as with any other noise source, separation distance is the best insurance against unacceptable noise impact, whatever its cause. Paragraph 22 of PPS22 and paragraph 41 of the PPS22 Companion Guide both endorse that approach. Although ETSU-R-97 adopts the opposite stance of rejecting the stipulation of a minimum separation distance, it pre-dates both documents and I find its commentary on the subject of separation to be of relevance. In particular, this records that *“the difference in noise emissions between different types of machine, the increase in scale of turbines and wind farms seen today and topographical effects described below all dictate that separation distances of 350-400 m cannot be relied upon to give adequate protection to neighbours of wind farms”*. The technology has, of course, moved on since that comment was made, but probably at greater rate than experience of the environmental effects of 120 m high turbines at about the 400 m distance. I record here only that a separation distance from houses of between 350-400 m would exclude turbine 5, of between 400-500 m would also exclude turbines 1 and 4, and of greater than 570 m would exclude them all.

*Flicker*

60. As the Companion Guide to PPS22 explains, shadow flicker only occurs inside buildings. For the purpose of my analysis, however, I do not regard shadow flicker as ambiguously as the Companion Guide might be taken to imply, simply as the casting of shadows over neighbouring properties (“shadow throw”). Rather, I regard it as the rhythmic pulsing of contrasting light and relative darkness that occurs when the size of a room window (domestic or otherwise)

excludes a significant proportion of sunlight other than that which is filtered through the orbit of the moving turbine blades. This contrast is greatest when the sun is brightest, so it is more apparent during some seasons of the year than others. It will also occur only when the sun is sufficiently low in the sky - normally at or about sunrise or sunset - to be seen through (rather than above or to either side of) the turbine blades so that the passage of sunlight is effectively blocked completely or substantially by each blade in turn. It does not occur when direct sunlight is not visible (such as when it is cloudy) or when the turbines are aligned away from the window (because of wind direction). Also, the flicker does not alternate at speeds likely to give rise to health effects – it is most likely to be experienced as a brief and relatively infrequent annoyance, for example by those waking up in a first floor bedroom without curtains or taking enjoyment in the last of the day's sunshine in an otherwise unlit downstairs living room or workplace. As with noise, its impact diminishes greatly with distance, the PPS22 Companion Guide advising that flicker effects have been proven to occur only within ten rotor diameters of a turbine, in this case equating to 820 m.

61. Coverage of the subject in Chapter 14 and Appendix 13 of the ES deals with "shadow throw" rather than shadow flicker. Relevant sections say, among other things, that the maximum distance for "shadow flickering" influence for the Enercon E-82 turbine with the hub height proposed is 1,552 m. Using WindPRO computer software and assuming an eye height of 1.5 m, the ES identifies a maximum of 105 buildings or "receptors" potentially exposed to the various "shadow flicker" effects of all of the turbines (adopting "worst case" parameters and "bare landscape"). The specific "receptors" in East Langdon and Pineham are identified in the Supplementary Environmental Information dated October 2007 on plan and by building reference number, but not by property address or description, so it does not follow that all are places of habitation. The 2008 SEI for the four turbine option remarks that the removal of turbine 1 would reduce the number of "receptors" affected by more than 50 shadow hours per year from 12 to 6, and that "flicker" effects at East Langdon School would be reduced from 30 shadow hours per year to 10 shadow hours per year.
62. The Council commissioned its own assessment of these results which, apart from observing that the turbines had been moved about 100 m south in the 4 turbine scheme (which the appellant later affirmed to be a result of typographical error and had not influenced the outcome), focussed on seven "representative" dwellings. There are no set thresholds of acceptability for shadow flicker in the UK, but guidelines adopted by the Irish Government apparently recommend that shadow flicker at neighbouring offices and dwellings within 500 m of a wind turbine should not exceed 30 hours per year or 30 minutes per day. On that basis, the study found that five of the properties would require mitigation for the 5 turbine scheme and four for the 4 turbine alternative. Since those are "representative" dwellings, this does not mean that only a maximum of five properties would be affected.
63. At the Inquiry, I drew attention to my difficulties in identifying, from the information before me, the actual numbers of places of habitation that might be affected by shadow flicker rather than "shadow throw". The approach taken in the ES and in the Appellant's suggested safeguarding condition is that a

scheme would be submitted to the Council for approval specifying the measures that would be taken if "shadow flicker" from any particular turbine was alleged by any particular building user to be occurring. The scheme would, according to the ES, include the supply of window blinds to those who agree, failing which photo-electric apparatus would be fitted to shut one or more of the turbines down at times when shadow flicker is a risk. However, before either of these measures would be implemented, the user of any property concerned would be required to keep a log of dates and times over a period of two weeks to demonstrate the pattern of occurrence. The log (or logs) would then be cross-checked for veracity by requesting the turbine manufacturer to produce their own calculations for the specific property concerned. It seems to me that with normal climatic and seasonal vagaries, the time span between original complaint and final remedy could thus be considerable, during which time up to 105 potential "receptors" (although probably far fewer on the basis of the Council's "representative" properties) could remain exposed to the "annoyance" of shadow flicker. I also question whether the fitting of window blinds would be regarded by any complainant as an acceptable (even if effective) response. In response to these concerns, the Council suggested an alternative condition that would be "pro-active" rather than "reactive" inasmuch as it would require detailed survey and calculations to more precisely identify affected properties before development commenced. With all of the ES "receptors" involved, that would, however, be a potentially arduous task and one that the Appellant could have difficulty in undertaking in the absence of any statutory right of entry to the properties concerned. Without any further information on how many properties, and which, might be affected by actual shadow flicker in time to be examined at the Inquiry, I therefore undertook a brief visual appraisal of a sample of properties during my site inspection.

64. From that, I am for the most part content that shadow flicker effects would be avoided by a combination of distance, contours and building orientation. This applies particularly in East Langdon. There, I saw that the school had a classroom facing towards the turbines but its two windows are, in my estimation, sufficiently large to dilute any shadow effect that might occur during normal school hours. St Augustine's church has a tall, narrow window facing towards the turbine field but this is of coloured glass and at the opposite end to the altar. Any internal contrast between light and shade would thus be much diminished and unlikely to impinge significantly on devotions. Flicker effects elsewhere within the centre of the village would be largely masked by trees, especially if turbine T1 is omitted. There would, however, in my judgement be potentially adverse shadow flicker effects with either five or four turbines at Seven Seas (facing kitchen window), Grove End (lounge and bedroom windows), Enifer Downs farmhouse (facing kitchen and living room windows), Little Pineham Farm and Dane Cottages (bedroom and living room windows). All of these are within 820 m of a proposed turbine and have wholly or mainly open views across the turbine field embracing easterly or westerly segments of the sun's transit. There might also be some small risk at more distant properties in Napchester, such as St Margaret's Farm (bedroom and living room windows) which are shown, in the Council's analysis, to be within the 0-50 hour exposure category.
65. The actual numbers likely to be affected are, therefore, relatively small and, for that reason, a "pro-active" planning condition broadly along the lines suggested

by the Council but specific to the properties I have identified would, I consider, meet Circular 11/95 tests and should be capable of establishing effective mitigation. Nonetheless, as with noise, adequate separation distance is the most robust “pro-active” protection against harmful impact, enabling the “re-active” fitting of control mechanisms to be held in reserve should unpredicted flicker occur (for example through seasonal or physical loss of existing screening vegetation, or the effect of raised eyeline at upper floor levels when compared with the ES measurement level of 1.5 m). I find it significant in this respect that dimensions of as little as between 360 m and 570 m represented by some of the properties in this case fall not just below, but well below, the ten rotor diameters criterion cited in the PPS22 Companion Guide. Use of that criterion as a minimum separation distance is (and not just at site selection stage) the only form of flicker mitigation that the PPS22 Companion Guide explicitly recognises.

### *Visual impact*

66. Paragraph 39 of the PPS22 Companion Guide affirms that the planning system exists to regulate the development and use of land in the public interest. In most cases, the outlook from a private property is a private interest, not a public one, and the public at large may attach very different value judgements to the visual and other qualities of wind turbines than those who face living close to them. Equally, people pass through a diverse variety of environments when going about their daily lives, whether by car or when using the local rights of way network, and I find nothing generally objectionable in turbines being part of that wider experience. However, when turbines are present in such number, size and proximity that they represent an unpleasantly overwhelming and unavoidable presence in main views from a house or garden, there is every likelihood that the property concerned would come to be widely regarded as an unattractive and thus unsatisfactory (but not necessarily uninhabitable) place in which to live. It is not in the public interest to create such living conditions where they did not exist before.
67. From the east, I saw that the wind farm would be fully exposed to view from Enifer Downs farmhouse and Seven Seas. The former is a single storey dwelling standing only about 200 m from the edge of the turbine field and the latter is a modestly proportioned two storey house set only about 500 m from the edge of the turbine field. The nearest representative photomontage to these is A19, which is taken at 190 m from turbine T1. However, that is the montage that I asked to be extended because it does not pan as far northwards as T1 which, it was agreed, would require an upward tilt of the head, at that distance, to see the blade tips. From the properties themselves, the turbines would spread fully across the outlook (more than one turn of the head) from main rooms and gardens of both properties, the distance between the two outermost turbine towers (T1 and T5) in this vista being approximately 700 m (or 782 m to outer blade tips). Dimensions of about 400-700 m are representative of turbine spacing throughout the proposed cluster, and all five would be visible with no significant screening by vegetation or contours. Significantly, with Enifer Downs farmhouse itself only 360 m from T5, my impression is that the visual experience of the occupiers from the main living rooms and garden of their property would be comparable to living actually within the turbine cluster. Although more distant, that impression would not be

much different from the kitchen and back garden of Seven Seas. The view of the turbines from living room windows and loggia of a third property, at Grove End, would be slightly more angled, and some of the turbines could be more easily screened by vegetation. Nonetheless, I consider that the looming presence of rotating turbines of the height proposed would be unpleasantly overwhelming and unavoidable from all three of these properties, and especially so at Enifer Downs farmhouse even if turbine T1 was excluded.

68. From the south west, the turbines would be plainly visible from Little Pineham Farm and Dane Cottages (as well as from a range of other properties hereabouts, but which are more distant and generally angled away from the turbines or have a measure of screening from farm buildings). Little Pineham Farmhouse is a small, two storey detached cottage about 100 years old, with its bay-windowed front facing towards the turbine field. Dane Cottages are currently undergoing refurbishment but present a three storey gable end towards the turbine field. I understand that there are to be main windows on each floor in this gable end (including a first floor living room and balcony) to maximise views that, on a clear day, apparently extend as far as Pegwell Bay. The nearest photomontage to both of these properties is A20, taken at a distance of 510 m from turbine T4, which is some distance further back than Little Pineham Farmhouse. The spread of the turbines from this direction would again be 700 m between the outermost turbine towers (T3 and T5) and although there would be some masking of the lower part of the tower of T5 by contours and vegetation, the upper part of the tower and the rotor would be wholly visible. That turbine would be less than 600 m from Dane Cottages while T3, T4 and T5 would all be within 800 m of both Little Pineham Farm and Dane Cottages. The occupiers of these properties too would be faced with the unavoidable and, in my estimation, unpleasantly overwhelming presence of rotating turbines spreading both horizontally and vertically across a substantial proportion of their main outward field of view. By comparing the turbine spacing to the distance from these properties, I again liken that to conveying the impression of living in or at a wind farm, rather than simply having a turbine cluster close by. The omission of turbine T1 would not significantly reduce this visual impact because it is the most distant from these properties and thus least prominent in this panorama.
69. At West Langdon, to the north of the site, the separation distance is greater, typically just in excess of 1 km. The relevant photomontages are A7 (amended) and A8. There is localised screening by a combination of contours and vegetation, but I saw that the settlement stands on a downward slope and is largely oriented to face towards the turbine field. This is particularly noticeable from Forstal Farm and the Millennium Green but also from the lane along the ridge to the Church and Church Farm (although these latter views are filtered between roadside trees). The spread of turbines in this instance (between T1 and T3) would be 800 m and, moving about the settlement at my site inspection, I gained the impression that the outlook from the whole of this small community would be dominated by their unavoidable presence, whether seen as a complete cluster, individually or just in glimpses of moving blades. In this case it is the spread of the turbines rather than their height that would, in my judgment, be so visually invasive as to make the settlement a less satisfactory place in which to live than it is now. That applies whether there

would be five turbines or four because turbine T1 is one of the more distant from this perspective.

70. There are some individual properties closer or equally close to turbines that I judge would be less affected. These include New Cottages at Guston, where turbine T5 would be only about 650 m distant but the greatest spread of turbines (in that case between T1 and T3) would be about 450 m further back. They would also appear much more tightly grouped, and thus less intrusive in the view, if turbine T1 is deleted. Although much the same applies at St Margaret's Farm in Napchester, the nearest turbine would be about 1.2 km away and all would be seen only as part of a much broader rural panorama. The turbines would barely be seen from Langdon Abbey, Langdon Court and Hart Cottage.
71. However, in those cases that I have identified where the full height and maximum spread of turbines in the numbers proposed would be seen at their greatest from closest to (typically at up to about 800 m), and with little or nothing by way of intervening screening, it is my conclusion that living conditions would be demonstrably harmed by significant and over-dominant visual impact. There would be conflict with the relevant SP and LP policies safeguarding against un-neighbourly development whether from noise, flicker or visual impact.

***Issue 6: Effect on cultural heritage interests, including locations of acknowledged scenic attraction.***

72. There was criticism of the ES coverage of cultural heritage (Chapter 10) at the Inquiry, but I am content that the evidence now before me deals with the subject in adequate detail. This includes descriptive material, commentary on the appropriate approach to consideration, and both analysis and critique of sensitivity, magnitude of change and significance of effects. I do not review all of this documentation here, but my findings are informed by it. I identify only the key points arising from the submissions and from my site inspection that have led me to those findings, focussing on the main cultural heritage interests over which there was dispute at the Inquiry. My assessment works progressively outwards from the site itself.

*On-site archaeology*

73. Table 10.1 of the ES identifies known or expected archaeological remains "within the site". This is misleading, because although some (such as the Roman Road) are on land over which the Appellant has control, not all are within the turbine field and few if any can be said to lie directly under the red line application site defining the turbine bases, tracks and sub-station. Nonetheless, they do indicate some likelihood of buried remains of at least local or regional significance being found during ground disturbance caused by construction of the turbine cluster. The Council points out that, to date, investigation has been limited to desk study without any consultation with the County Archaeologist or others and that, if further investigation is not undertaken until after permission has been granted, any prospect of preservation in situ might be inopportunately eliminated.
74. Part B of PPG16 makes clear at paragraph 19 that consultation between developers and planning authorities should take place at the earliest stage and



paragraph 21 says that where there are indications that important archaeological remains may exist, it is reasonable for the planning authority to request the intending developer to arrange for field evaluation (distinct from full-scale archaeological excavation) before any decision on the application is taken. This advice is also manifested as a main thrust of SP policy QL7. Nonetheless, the presumption in favour of preservation in situ in paragraphs 8 and 27 of the PPG16 Annex applies only to nationally important remains and, as paragraph 27 further avers, involves a considered balance between a range of factors including the need for the development.

75. With that advice in mind, I acknowledge that the routing of construction traffic across the site is open to variation and the permanent access track network might well be capable of being constructed on a load-spreading platform laid on top of the ground rather than dug into it. If necessary, it might also be possible to site the substation apparatus within the existing former colliery-related building in the centre of the site. The excavation of turbine bases is nonetheless a very invasive process in both depth and spread, and the bases below 1 m in depth are not intended to be “reversible” development. The tightly drawn application boundary leaves little scope for micro-siting of the turbine bases should remains be found during the excavation process. Aerial photographs suggest, however, that the greatest likelihood of remains being found is in the vicinity of T1, so omission of that turbine would contribute to minimising archaeological risk.
76. On balance, therefore, the potential for harm to archaeological interests is, I consider, small and in this case insufficient by itself to warrant refusal of permission for, at least, a four turbine scheme. A condition requiring, before development commenced, more detailed survey, recording and, if necessary, preservation elsewhere, would be likely to provide sufficient protection. Nonetheless, it is regrettable that PPG16 advice has not been more diligently followed, particularly when a relatively small amount of agreed pre-application field work could have lent greater certainty to the subject of preservation than reliance solely on post-decision investigation required by planning condition.

#### *Langdon Abbey*

77. Langdon Abbey is both a Scheduled Ancient Monument and a Grade II\* Listed Building. Only limited visual evidence of the Abbey itself now survives, but “Langdon Abbey” also refers to the farm complex constructed around the remains and includes the farmhouse, built in the late 16<sup>th</sup> Century. The ensemble stands in a secluded woodland dell about 500m to the north of the turbine field. To my mind it is the dell that provides the visual envelope of the historic setting here, not any part of the turbine field itself. The Council accepts that the significance of potential effect would be slight to none, and I find no reason to depart from that assessment.

#### *East Langdon Conservation Area and related cultural interests.*

78. East Langdon is one of the small villages of historic character and profoundly rural quality that populate the dry valleys dissecting the local landscape. The Conservation Area extends to within about 550 m of turbine 1 and covers the nearest end of the village to the turbine field, amounting to just over half of its built-up area, thus excluding more modern ribbon and estate-type

development at the north eastern end. At the centre of the Conservation Area is a small triangular green, apparently created following the demolition of a former farmstead during the last century. The loose assemblage of buildings around this include St Augustine's Church (a Scheduled Ancient Monument and a Grade II\* Listed Building), Jossenblock (a large house and barn, (Listed, Grade II\*), The Rectory (a Grade II Listed Building) and Langdon Court (a Grade II Listed Building). There is also a group of newly constructed barn-like dwellings off one side of the green. Pervading the whole are an emphatically sylvan setting, architecture of traditional scale and appearance, and a notable lack of visually intrusive features.

79. From within the Conservation Area, there would be relatively few places from which the turbines would be seen because of the masking effect of trees and the valley sides. From parts of the gardens of Jossenblock, The Rectory and Langdon Court, for example, any turbine would only be seen when facing away from the Listed Buildings. From those and from the Green glimpses mainly of turbine T1 would be at or above hub height with the bulk of the towers behind trees and thus low on the skyline. If turbine T1 is excluded, historically significant views and settings would, I consider, be adequately preserved.
80. The Rector of St Augustine's put to me that the presence of rotating turbines within sight and earshot of the Church would be disturbing to acts of worship, remembrance and celebration. A similar point was made by the Rector of St Peter's Church in Church Whitfield. Churches are the main spiritual and pastoral focus of community activity and local people identify strongly with them to establish, individually and collectively, their own distinctive sense of place, purpose and history. The quality of the buildings themselves and of their surroundings also often represent the pinnacle of a settlement's architectural achievement and they are widely recognised and appreciated as a showcase of the environmental quality of a settlement and the social well-being of its people. For all of these reasons, it seems to me that a unique and particularly compelling importance attaches to maintaining the peace and tranquillity of their surrounds and the quality of views to, from and of them that are religiously, socially, architecturally, historically or visually important to the community. In an economic sense, these functions in turn contribute to ongoing preservation and enhancement of the buildings themselves. I accordingly include all of these factors in my consideration of the desirability of preserving or enhancing Listed Buildings and their settings for the purposes of Section 66(1) of the Planning (Listed Buildings and Conservation Areas) Act 1990. I also see no reason to exclude from that consideration recently extended areas of burial ground, where these have a direct visual or physical relationship to a church. However, it would plainly be untenable to reject development simply on the basis that it would be seen from an historic church or associated graveyard – to do so would effectively exclude turbines from most of rural (and urban) England.
81. Turning specifically to St Augustine's Church, therefore, I am content that turbine T5 would not be seen in the view along the approach path between the Lych Gate and the porch and that none would intrude into areas around the porch that might be important to the setting of the church when, for example, wedding photographs are being taken. It was suggested that any future loss of a nearby screen of tall conifer trees might expose the main churchyard to view

of the turbines, but there is only hearsay evidence that their removal might be threatened even if the existing alignment of the Conservation Area boundary does not lend protection. There is no dispute, however, that turbines would be plainly visible further to the rear of the Church, above a more distant line of foreground trees, and most notably across part of the outward view at and towards the end of the extended graveyard area. Turbine T1 would be just 0.58 km from this location. The Appellant has suggested that some additional boundary planting could create suitably solid screening. There is, however, only limited space for this within the churchyard and I saw that there might be adverse implications for a section of retaining wall here. It would also be likely to take some time to establish full effect. In the absence of suitable screening, the presence and movement of turbines this near could, I consider, be found so pervasive as to disrupt those seeking solace in quiet contemplation, particularly directly after bereavement, and I would come to a similar view whether exercising my Section 66(1) duty or not.

82. Nevertheless, the most secure safeguard for ensuring preservation of the “contemplative” setting of the Church would, I consider, be greater separation distance. Exclusion of nearest turbine (T1) would be beneficial in that context, but it seems to me that the spread of turbines across this view is also a factor. I say that particularly in the context of views into and out of the Conservation Area and the wider setting of the Church itself. From the elevated parts of Pond Lane and Hollands Hill (and from some points on the footpath between) I saw that the low but clearly identifiable tower of the Church is a significant landmark in itself, enabling the eye to alight easily on other visible parts of the settlement and providing a clear reference for the scale of buildings within it. The turbine cluster would effectively become a broad and eye-catching backdrop to this charmingly arcadian scene. The contrast in height, modernity and character between these very different structures in such close juxtaposition would, I consider, be jarring, an effect that would be amplified by the spread of turbines to T5, which would be somewhat detached from the others when seen from these general directions. It is thus my conclusion that neither four nor five turbines would suitably preserve or enhance the setting of the Church, or what I regard as important views into the Conservation Area.

*Church of St Peter, Church Whitfield*

83. This Church is both a Scheduled Ancient Monument and a Grade II\* Listed Building. Despite its rural location, it serves a sizeable and mainly urban parish and stands a little under 1 km to the south west of the nearest turbine, in this case T3. The front of the Church and churchyard face away from the turbines, which would only be visible from the graveyard behind it, mainly from two conjoined areas of land that have become a graveyard extension. The relatively few burials that have so far taken place here are in a line along the western boundary, in the shelter of a boundary hedge. There is also a small garden of memory sited more towards the centre of the westernmost section of land, and a memorial bench stands close to the north east boundary but faces inwards towards the Church rather than outwards across the surrounding landscape. I saw that the A256 between Dover and Sandwich passes in a cutting just beyond this boundary and I found the traffic noise here very audible. Turbine noise would not, in my estimation, be heard above this at the distance concerned. However, all five turbines would be seen rotating well

above the woodland canopy on the horizon. As at St Augustine's, turbine T5 would appear in relative isolation to one side of the cluster, which would thus be strung out for a considerable distance squarely across the main outward field of view, making it difficult to ignore their presence. I acknowledge that the visual relationship to the Church itself is, at best, tenuous in this case but the physical and functional relationship between the Church and this section of graveyard is likely to become more consolidated over time. The sensitivity of viewpoint and viewer are also factors to which I attach weight in coming to the conclusion that, while the historic setting of the Church would not be directly harmed, the proposal for either four or five turbines would have some adverse impact on the general ambience that those attending or visiting the extended graveyard might reasonably expect to experience.

#### *Swingate Mill*

84. This tall brick windmill tower is a Grade II Listed Building. The sweeps are no longer attached and the tower has been adapted for residential occupation. It stands in relative isolation about 2 km to the south east of the turbine field. It is a landmark of some prominence in the local landscape and its historic setting might reasonably be taken to extend as far as is necessary to demonstrate the importance of topography to wind exposure. I do not therefore question that the proposed turbines can be held to fall within its setting. Nonetheless, there is clear synergy between both the mill and the turbines inasmuch as they would be inter-visible examples of man's past and present approaches to harnessing the power of the wind in this area and the variety of uses to which that power can be put. The turbines would also provide a contrasting image of the progression of the technology and the physics of wind capture relative to height, scale and appearance. The separation distance between the mill and the turbines would be sufficient for each to be seen as an individual entity and I take the view that the setting of the Listed Building would in this case be enhanced rather than diminished by their distant presence.

#### *Maydensole House*

85. This Grade II\* Listed Building stands about 1.5 km from the site and is part of a small enclave of farm development (including a Grade II Listed barn) situated at the bottom of a valley to the north west of West Langdon. The Council acknowledges that the fold in the landscape here coupled with woodland shaws to the south and west prevent any unacceptable juxtaposition of turbines and buildings. I share that view. The setting would be preserved.

#### *Church of St Martin of Tours, Guston*

86. I agree with the Council's assessment that the setting of this Grade II\* Listed Church would also be preserved.

#### *The White Cliffs and South Foreland Lighthouse*

87. The length of the Saxon Shore Way from Kingsdown via Hope Point and then atop the cliffs to Bockell Hill where stands the Dover Patrol memorial (VP 15), a tea room and a swathe of land owned by the National Trust to my mind ranks, in terms of visual quality, among the finest sections of coastal paths in England. In any landward view from this well trodden section of footpath the turbines would represent a distant but significant landmark. Many who come

here specifically to absorb and admire the qualities of rurality, natural beauty and stillness might find the presence of such a broad array of turbines incongruous, even at a distance of 4.6 km, when seen as part of the experience of a landscape of such high intrinsic aesthetic quality. Much the same applies to the view from South Foreland Lighthouse (Grade II Listed). This is perhaps not the most easily accessible among the National Trust's portfolio of buildings, and is set adjacent to an area of scrubland concealing some large World War II bunkers. Nonetheless, the view from the platform around the light encompasses probably the most panoramic and uncluttered stretch of landward skyline available from the cliff tops (A23). From here I noted, in particular, that the skyline silhouette of the turbine cluster would be much less compact and symmetrical than the three WWII radar masts (maximum 110 m high) at Swingate, while the rotation of their blades would draw the eye more compulsively. The setting of this building would not, in my estimation, be impaired but the attractive and uncluttered panorama, that people come to enjoy from it, would be.

*Dover Castle and the Western Heights.*

88. I was unable to climb the keep of Dover Castle (Grade I Listed and Scheduled Ancient Monument) during my inspection as building work was in progress and I can therefore only rely on the verbal and photographic evidence before me. While it was argued that the seaward view alone was historically significant, I heard that the rear of the Castle was most vulnerable to attack, formed the processional entrance route and provided a first or last sight of England for royal guests arriving from or departing to the continent. The present day visual relationship to Fort Burgoyne and the Duke of York's Royal Military School further consolidate the view northwards (to the horizon above the ridge beyond) as part of the setting of castle. Within this setting, it is apparent from the relevant photomontage (A17, at 3.72 km) that even though the Swingate masts appear taller than the proposed turbines because of their greater proximity, the spread and rotation of the turbines on the horizon would represent a more demanding and less harmonious focus for the eye. I also find turbine 1 in particular in this view to be uncomfortably close to the otherwise suitably isolated tower of the Duke of York's Royal Military School. In these specific respects, I consider that the setting of the Castle would not be preserved or enhanced.
89. Conversely, from the Western Heights, I saw that the angle of view is away from the Castle and passes across the built up area of Dover itself (which portrays a scene of movement rather than stillness) to a part of the skyline already populated with a number of pylons and masts. Views of the blade tips from here (VP16) would not, I consider, be either significant or incongruous.

**Other matters**

90. Paragraph 21 of the PPS22 Companion Guide advises that amendments to existing roads required to gain access to a site should be detailed in any wind farm application. At the time the ES was compiled, it had been intended to deliver turbine components via the port of Dover but, in the light of concerns expressed by the Highway Authorities (in this case both the Department for Transport and the County Council) it was proposed at the Inquiry to use the port of Chatham instead. The Companion Guide does not stipulate the length

of the access between the point of manufacture/importation of the turbines and delivery to site over which road alternations need to be considered by the ES. However Chatham was, I understand, used for turbines of similar size for Little Cheyne Farm and, on the basis that no further alterations would be needed in the Medway Towns, I indicated that I would consider only the section between the point of departure from the Trunk Road network and the North Dover site entrance. In effect, that section is adequately covered by the existing ES and I could see no reason to require any further Environmental Information on the subject. While the route is narrow in places, and its use would inevitably cause some inconvenience to local people, I am content that turbine delivery would not represent an insurmountable obstacle to turbine development. Any residual concerns could, I consider, be suitably dealt with by planning conditions.

91. The Companion Guide further says that, with regard to driver distraction, the presence of turbines within sight of roads should not be considered particularly hazardous. In this case, objector concern focuses on the A258 between Dover and Walmer. This is a two way road, for the most part with no footways. It is subject to the national 60mph speed limit. I was told that this road has a poor accident record, there having been a number of fatalities along it. In places, forward visibility is limited by undulations and it was also pointed out that the road serves as an access to a caravan site at Martin Mill, apparently much frequented by drivers from the continent who might be unfamiliar with driving on the left. Nonetheless, even at its closest, the turbine field would be some 2 km to the west of the road and, at this distance, turbines would only appear directly in front of drivers approaching from junctions on its eastern side, or departing from junctions on its western side. There is no reason to believe that continental motorists would regard wind turbines as such a novelty as to distract their attention when undertaking these manoeuvres. The main risks would seem to be from poorly sighted overtaking of one vehicle by another, and from drivers coming unexpectedly upon slow moving or stationary traffic. Drivers are required by law to take reasonable care to ensure their own and others' safety at all times. I do not therefore consider that the turbines would add to accident risks on A258.
92. Moreover, although I am aware of a great deal of research on the subject, I have found no evidence that actually demonstrates a causative relationship between the presence of turbines and any attributable pattern of the incidence of ill-health, despite the presence of a great number of wind farms in the UK and elsewhere. While understanding parental concerns, I do not therefore attach any weight to a suggestion that, on the basis of "attachment theory", the turbines might give rise to depression and declining levels of academic achievement among local school children.
93. Concern about the effect on business interests was drawn to my attention in the context of two local enterprises – one being the "White Doves of Dover" at Dane Cottages in Pineham and the other being a studio used for fine art restoration attached to a house on the edge of Guston. I understand that doves might be reluctant to fly across the turbine field, but not all outward or return flights will necessitate this. From the ornithological evidence before me, I also have little reason to doubt that the birds would soon grow accustomed to the presence of the turbines and find suitably safe routes between or around them.

The art studio at Guston falls within an arc of the sun's traverse where shadow would not be cast by the turbines.

94. Following correspondence with MOD during the Inquiry, it would also seem that provision of turbine lighting would not be a significant obstacle to development of the wind farm, any request for low intensity or infra-red illumination of the nacelles being a matter that can be suitably dealt with by planning condition. Risk of public danger from ice-throw could be similarly avoided by planning condition requiring the turbines to be fitted with vibration sensors. The turbines would, I consider, be sufficiently exposed to view to avoid startling horses and riders using the local road and bridleway network. However, I do take note of objector criticism that turbine T1 would lie within "fall-over" distance of Waldershare Lane and that turbine T5 would lie within "fall-over" distance of the 33kV power lines traversing the site itself. While there are no mandatory separation distances in either respect, both indicate that the siting of turbines has not been undertaken with a view to achieving maximum safety.

**Overall conclusions:**

95. In dividing the main issues in this case into two categories, I have sought to distinguish between broad matters of policy principle and detailed matters of development control.
96. In the first of these categories, it is clear that there is a need in Kent to increase capacity for the generation of electricity from renewable sources, including wind, in order to ensure that the target expressed in extant and emerging RSS for the period to 2016 can be met. There is no statutory or other need to explore alternatives because this site has the wind resource to make due contribution and is in a part of Kent where there is, I consider, landscape capacity to absorb a "small cluster" of 120 m high turbines as defined in SP paragraph 9.26.
97. However, beyond those points there are two repeating criticisms of the application scheme that variously permeate through each of my remaining conclusions. The first is inadequate attention to prescribed processes in the formulation of the application, and the second is failure to demonstrate the sensitive approach to exploitation of renewable energy resources expected by paragraph 16(i) of PPS7.
98. In the case of aviation interests, I consider that paragraph 25 of PPS22 requires a more attentive response than a unilateral suggestion by a wind farm developer, in an ES or at Inquiry stage, that pilots of aircraft be advised to fly through or around potential hazards placed in their present main flight paths. With KIA, it is also not in my view sufficient for the Appellant to argue that the prospect of ATC being unable to provide a satisfactory service is so small that it should be ignored. Air accidents are rare but generally arise from unlikely and unforeseen combinations of events. When they do occur, they also often end in fatality, as the light aircraft crash above East Langdon in 1996 demonstrates. I therefore look upon the maintenance of air safety as an important public interest and a material planning consideration of great weight. It is the purpose of ATC to minimise the unforeseen, and this can only be achieved by being able to offer the best level of service that is practicable. There may or may not be a way in which radar effects of concern KIA can be economically

mitigated (at least until such time as the airport's growth ambitions materialise). Mr James's evidence to the Steadings Wind Farm Inquiry, for example, suggests that there might be. However, despite a collaborative assessment having apparently been offered by the developer, and co-operation and engagement having apparently been offered by KIA, for whatever reason the parties have not consorted in discussion or investigation of the subject. I am left only to either agree or disagree with the Appellant's assertion that the turbines, by themselves, would not, in the CAA's words, "diminish the existing ATC service or constrain the future expansion of that service".

99. In that respect, the unique features that make the North Dover Area a hub of flying activity and thus problematic for ATC at KIA include the position of the Dover VOR beacon and the presence of the White Cliffs, the short sea crossing and the thermals above the Downs. Those features cannot be moved and nor can the flight patterns associated with them to achieve the requisite 5 km avoidance distance, whereas the siting of wind turbines is comparatively footloose. It follows that, if the ATC service would be diminished or constrained and suitable technical mitigation cannot be agreed, it is the turbines that would have to be moved and not the flight paths.
100. The problem at Inglenook airfield is different in both character and scale and may, with further discussion, prove more readily capable of being overcome for example by adopting the four turbine option and, if necessary, agreement not to fly in certain weather conditions. Again, discussion with the operator was recommended by CAA but this was not followed through with any vigour, a criticism that can be applied also in some measure to at least the first round of correspondence with MOD on the subject of turbine lighting, which was not resolved until the end of the Inquiry.
101. On the balance of the evidence placed before me, I have found demonstrable risks that ATC and air safety would be unacceptably compromised by the presence of the proposed turbines. More particularly in PPS22 terms, however, it is my conclusion that those risks, no matter how small they might be, have not been either properly or satisfactorily addressed or resolved. In either case, I am unable to conclude that this is an acceptable location, in principle, for a turbine cluster to be developed, and it would be wrong to grant conditional permission in the absence of any certainty that workable mitigation could be agreed later.
102. Turning then to the development control details, I again find inadequate attention to process, not only in relation to the ETSU-R-97 recommendations for measurement of background noise levels but also in the way in which the ES deals with "shadow throw", leaving the more important subject of "shadow flicker" open largely to conjecture. In cases where there is substantial separation between turbines and neighbouring places of habitation, these matters of process may not be significant. However, although the Appellant's planning witness was able to refer to cases where turbines had been sited at about 600 m from one or two dwellings, he accepted that he had not before come across a case in which turbines of the size and number involved in this case have been proposed so close to so many properties. Indeed, having examined all of the many wind farm decisions in the Inquiry documents (not all of which include dimensions), and on the basis of my own experience, I come



to much the same conclusion. That may or may not be because schemes with lesser separation distances have been “weeded out” at the pre-application stage of impact analysis but it does, in my opinion, at least signal a need for particular caution.

103. Different opinions were expressed to me on how long it would take, and what would be needed, to check the validity of background noise levels with fresh measurements taken on a consensual basis. However, I find that this is not a matter that can be left to planning condition, because the margins here are so tight that there can, at the present point in the decision-making process, be no guarantee that achievable noise limits would then derive from them. To impose a condition in such circumstances would (as with radar mitigation at KIA) be contrary to the judgment in *Maureen Smith and S of S for the Environment, Transport and the Regions and others [2003] EWCACiv262*, to which LAG was at pains to direct me. The risk of unacceptable shadow flicker is, I acknowledge, slight and more readily susceptible to control by planning condition. However, public perception of the least satisfactory living conditions will inevitably attach to those properties considered to be most exposed to the combined effects of noise, flicker and visual impact. It cannot pass without notice that my adverse findings on the last of these coincidentally alight also on the same properties as the first two. I have not been convinced that physical separation between turbines and places of habitation would be sufficient in this case to ensure that satisfactory living conditions would be maintained.
104. I return again to questions of process in relation to my findings on cultural heritage interests, where I note that the approach recommended in PPS16 to investigation of on-site archaeology has not been followed. That aside, the impact of the turbines on other cultural interests would be visual rather than physical, and both more widely and thinly scattered. English Heritage has not objected, but in the case of the two churches to which I have referred (St Augustine’s and St Peter’s), I nevertheless consider the turbines to be uncomfortably close and conspicuous. In comparison, the effect of the turbines on the setting and views into and out of East Langdon Conservation Area, and on more distant views from Bockell Hill, South Foreland Lighthouse and Dover Castle are, I consider, more a matter of broad landscape composition (or “landscape architecture” in its grandest sense). I attach importance to that subject in this case because of the acknowledged quality of the respective viewpoints (including the quintessentially undisturbed rural setting of East Langdon) and the numbers and likely qualitative expectations of visitors to them. In all of these, it is the number and spread of the turbines, together with their silhouette above the skyline, that I find unacceptably inelegant.
105. Omission of turbine T1 would go some way to addressing spread but the remaining even number of turbines would serve only to make the silhouette still less attractive, by creating what might, by some, be recognised as a restless architectural form (because, like a house without a front door, there would be no central point for the eye to naturally alight upon). Conversely, omission of two turbines, for example T1 and T5, would leave the outline of a simple trinity of more closely spaced turbines which, I consider, the eye could more easily assimilate. Such an outline would blend more comfortably into long distance views and settings, provide greater separation from East Langdon (including St Augustine’s Church, and other places of habitation to the east),

and be less likely to dominate the outlook from West Langdon. It would also impinge less intrusively into the view from the extended graveyard area of St Peter's Church. Notably too, safety concerns about "fall over" distance would be overcome, while at Enifer Downs farmhouse (which is the closest of any dwelling to a proposed turbine), omission of both T1 and T5 would almost halve the spread of turbines and nearly double the distance between the house and those that would then remain. There would thus be less impact on neighbour living conditions here and nearby, even though the absence of T5 would only peripherally reduce the visual effect on residents in Pineham. Investigation of the implications of excising these two turbines would, furthermore, allow for consideration of a greater range of alternatives for the preservation of any archaeological finds that might be identified by timely field "evaluation".

106. Nevertheless, notwithstanding the context provided by my ruling following the pre-Inquiry meeting, both the Appellant and the Council cautioned against reducing the number of proposed turbines, not least because of the implications for the amount of energy the site would then be able to generate. Even with three turbines, important matters of principle (air safety) and process (noise) that I have identified would remain to be properly addressed. Separation distance from properties at Pineham might, as paragraphs 55, 65, 68 and 103 above imply, also prove insufficient (if the combined effects of noise, flicker and visual intrusion are still found to require mitigation) to ensure satisfactory living conditions. Planning conditions alone cannot resolve those points, whether for five turbines or any lesser number.
107. In sum, notwithstanding the significant weight attached by paragraph 1(iv) of PPS22 to the wider environmental and economic benefits of proposals for renewable energy projects, and my finding that there is both need and landscape capacity for renewable energy generation in this part of Kent, important safeguards in National planning guidance and the statutory development plan have not, in this case, been satisfactorily met. I have considered all other matters raised at the Inquiry, including ecological, arboricultural and agricultural concerns but I find nothing to alter my conclusion that the scheme as put before me is unacceptable in policy, safety and environmental terms. It does not represent a sensitive approach to exploitation of renewable energy resources in this particular area of countryside and I therefore refuse planning permission for it.

*D Lavender*

## APPEARANCES

### For The Local Planning Authority:

Mr Richard Wald	Of Counsel, instructed by Mr G Mandry, Principal Solicitor to the Council
He called	
Ms S Kaner	Rummev Environmental Ltd
MPhil, BA(Hons), MLI	
Mr J Trehv	Enviros Consulting Ltd
BA MifA	
Mr A Jensen	Ramboll Group (Denmark)
Dr A Farahmand-Razavi	Ramboll Whitbybird
BEng, MEng, PhD, CMILT, MIHT	
Mr M Miller	Terence O'Rourke Ltd
BA, MPhil, MRTPI	

### For The Appellant:

Mr John Houghton	Partner, Bond Pearce LLP Solicitors 3 Temple Quay, Temple Back East, Bristol BS1 6DZ
He called	
Mr G David	Ecotricity Ltd
Dip LA, MLI	
Mr M Spaven	Spaven Consulting
MA, MSc	
Mr D Collett	R Collett and Sons (Transport) Ltd
Dr A McKenzie	The Hayes McKenzie Partnership
PhD, BSc, MIOA	
Mr D Stewart	David Stewart Associates
MA(Cantab), DipTP, MRTPI	

### For Langdon, Guston and Whitfield Parish Councils:

Mr James Burton	Of Counsel, instructed by the Parish Councils
He called:	
Ms P McIntyre	Chair, Langdon Parish Council
Mr D Leach OBE	Dover Society
Mr C Clayson	Local Resident, Pineham
Mr G Preece	Local Resident, Pineham
Mrs J Miller	Local Resident, West Langdon
Ms A Logan	Local Resident, East Langdon
Ms E Smith	Local Resident, East Langdon
Mr C Smith	Local Resident, East Langdon
Mr R Walters	Local Resident, Guston

Mr J Moore	Local Resident, Guston
Ms D Colam	Local Resident, Guston
Ms J Nutt	A258 Campaign
Mr J Sencicle	Ramblers Association
Rev T Dirkin	St Augustine's, Parish Church, East Langdon
Rev Ms B Way	St peters, Parish Church, Whitfield

**For The Langdon Action Group (LAG):**

Ms Tina Douglass	Of Counsel, instructed by Mr Anthony Hyde
She called	
Ms M Bolger	LizLake Chartered Landscape Architects and Urban Designers
BA(Eng), BA(L.Arch), DipLa, CMLI	
Mr A Hyde	Chairman, LAG
Mr M Stigwood	MAS Environmental
EHO, DipANCE, MIA,FRSH	

**For Infratil Kent Airport Ltd:**

Ms J Gillies	Solicitor, McGrigors LLP
She called	
Mr K James	Bristec Radar and Systems Engineering Consultants
Mr P Thompson	Senior Air Traffic Controller, Kent International Airport
Mr D Leitch	Group General Manager Business Development, Infratil Airports Europe Ltd

**Interested Persons:**

*Opposing:*

Mr A Sencicle	Dover Society
Mr G Thomas	CPRE Kent
Mr G Smith	Inglenook Farm, Roman Road, Maydensole, near Dover, Kent

**DOCUMENTS**

**General**

Document	1	Attendance lists for each day of the Inquiry.
Document	2	Minutes of Pre-Inquiry Meeting.
Document	3	Inspector's Pre-Inquiry Ruling on Admissibility of 4 Turbine Scheme.
Document	4	Inquiry timetable (final)
Document	5	Core documents, as follows:

**A. Application Documents - Wind Turbine**

- A1 Planning Application dated 21 September 2007
- A2 Environmental Statement (September 2007)
  - (a) Non-Technical Summary
  - (b) Text
  - (c) Appendices
- A3 Planning Statement (September 2007)
- A4 Design and Access Statement (September 2007)
- A5 Statement of Community Involvement (September 2007)
- A6 Supplementary Environmental Information (December 2007)
- A7 Flood Risk Assessment (December 2007)
- A8 Development Control Manager Report to Planning Committee (5 June 2008)
- A9 Minutes of Planning Committee (5 June 2008)
- A10 Consultee Responses
- A11 Third party responses to Application
- A12 Ramboll Whitbybird: Initial review of Environmental Statement (February 2008)
- A13 Ramboll Whitbybird: Review of Supplementary Environmental information (November 2008)
- A14 Scoping Opinion Request by Ecotricity (November 2006)
- A15 Local Planning Authority Scoping Opinion (January 2007)
- A16 Supplementary Environmental Information (October 2008)
- A17 Supplementary Environmental Information (December 2008)

**B. Post-Appeal Documents**

- B1 None

**C. Planning Policy Documents**

**Development Plan**

- C1 Regional Planning Guidance 9 for the South East (which includes replacement Chapter 10 (Energy Efficiency and Renewable Energy))
- C2 Kent and Medway Structure Plan (adopted July 2006)
- C3 Dover District Local Plan (adopted 2002) - As amended by SoS – with Proposal Maps
- C4 Secretary of State's letter and direction concerning the saved policies of the Dover District Local Plan
- C5 Kent and Medway structure Plan SPG1: Landscape Character (2006) and Maps
- C6 Kent and Medway Structure Plan SPG2: Biodiversity Conservation (2006)

**Emerging Development Plan**

- D1(a) Emerging draft Regional Spatial Strategy for the South East – the South East Plan
- D1(b) "Panel Report on the Regional Spatial Strategy for South East England" August 2007
- D1(c) Proposed Changes from the Secretary of State in relation to the Draft South East Plan
- D2(a) Emerging LDF documents as relevant:
  - (c) Dover District Local Development Framework
    - (a) Core strategy
    - (b) Site allocations
    - (c) Development contributions SPD

**F. Planning Policy Statements (PPS) and Companion Guides**

- F1(a) PPS1: Delivering Sustainable Development (2005)
- F1(b) PPS1: Supplement on Climate change
- F2 PPS 7: Sustainable Development in Rural Areas (2004)
- F3 PPS 9: Biodiversity and Geological Conservation
- F4(a) PPS 22: Renewable Energy (2004)
- F4(b) PPS22 Companion Guide (2004)
- F5 Consultation: Planning Policy Statement: Planning and Climate Change – Supplement to Planning Policy Statement 1 (December 2006)

**G. Planning Policy Guidance (PPG)**

- G1 PPG 15: Planning and the Historic Environment (1994)
- G2 PPG 16: Archaeology and Planning (1990)
- G3 PPG24: Noise (1994)
- G4 PPG13: Transport (2001)

**H. Other Planning Documents**

- H1 Planning White Paper (Planning for a Sustainable Future)
- H2 Department for Communities and Local Government "Environment Impact Assessment: a Guide to Good Practice & Procedures – a consultation paper" (June 2006)
- H3 Town and Country Planning (Environmental Impact Assessment (Amendment) (England) Regulations 2008  
Town and Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999

**I. Local Authority and Statutory Body Reports**

- I1 Landscape Assessment of Kent(Kent County Council)
- I2 The Kent Downs AONB Management Plan (2004) Kent Downs AONB Joint Advisory Committee
- I3 Kent Downs AONB Landscape Design Handbook' (2005) Kent Downs AONB Joint Advisory Committee

**J. Government Circulars**

- J1 ODPM Circular 11/95: "The use of Conditions in Planning Permissions"
- J2 ODPM Circular 02/99: "Environmental Impact Assessment"
- J3 Circular 1/2003: Safeguarding Aerodromes, Technical Sites and Military Explosives Storage Areas

**K. Various Wind Farm Appeal Decisions**

- a. Lamerton (APP/Q1153/A/04/1170234)
- b. Werfa (APP/F6915/A/02/1097582)
- c. Guestwick A (APP/K2610/A/05/1180685)
- d. Guestwick B (APP/K2610/a/05/1180685)
- e. Llethercynon (APP/T6850/A/03/1122720)
- f. Penpell (APP/Q0830/A/05/1189328)
- g. Ceredigion (APP/D6820/A/07/1200875)
- h. Whinash (DTI decision letter and Inspector's conclusions and recommendations)
- i. Knabs Ridge (APP/E2734/A/04/1161332)
- j. Yelland (APP/Q1153/A/05/1180685)
- k. Den Brook (APP/Q1153/A/08/2017162)

- l. Fullabrook (DTI GDBC/003/00024C) (decision letter, consent and Inspector's conclusions)
- m. Crimp
- n. Crow Holt (APP/A3010/A/06/2017850)
- o. Shooters Bottom (APP/Q3305/A/05/1181087)
- p. Wern Ddu (APP/R6830/A/05/1185359)
- q. Middlemoor (DTI/GDBC/001/00245C)
- r. Kessingland
- s. Ellands
- t. Darracott (APP/W1145/A/03/1119641)
- u. Knabs Ridge (APP/E2734/A/04/1161332)
- v. Carsington
- w. Bradwell (APP/X1545/A/06/2023805)
- x. Scout Moor
- y. Roskrow (APP/Y0815/A/03/1129335)
- z. Corlic, Greenock (Inverclyde)
- aa. Bradworthy (Torrige)
- bb. Elsham
- cc. Shipdham 2003
- dd. Shipdham 2006
- ee. Boxworth and Conington (APP/W0530/A/05/1190473)
- ff. Inner Farm (APP/V3310/A/06/2031158)
- gg. Thackson's Well (APP/E2530A/08/2073384)
- hh. Jordanstone, Fishguard (APP/A/98/512221)
- ii. Mynydd Y Gwrhyd (APP/Y6930/A/05/1189610)
- jj. Rossie, Auchtermuchty (P/PPA/250/675)

**L. Renewable Energy Documents**

- L1 Directive on Renewables 2001/77/EC
- L2 Scottish Natural Heritage, "Guidelines on the Environmental Ecotricity Impacts of Wind farms and Small Scale Hydro Electric Schemes"(2001)
- L3 DTI Energy White Paper "Our Energy Future: Creating a Low Carbon Economy" (2003)
- L4 Enterprise and Culture Committee of the Scottish Parliament, 6<sup>th</sup> Report "Renewable Energy in Scotland" (2004)
- L5 EC Communication "The share of renewable energy in the EU", COM(2004)366 final (2004)
- L6 House of Lords Science and Technology Committee, 4<sup>th</sup> Report of Session 2003-4 "Renewable Energy: Practicalities" (2004)
- L7 National Audit Office Report " Department of Trade and Industry: Renewable Energy" (February 2005)
- L8 Wind Power and the UK Wind Resource, Environmental Change Institute at Oxford University (2005)
- L9 Sustainable Development Commission Report, "Wind Power in the UK" (2005)
- L10 UK ERC "The costs and impacts of intermittency: an assessment of the evidence on the costs and impacts of intermittent generation on the British electricity network" (2006)
- L11 DTI Energy Review "The Energy Challenge" (July 2006)
- L12 The Stern Review, "Economics of Climate Change": Executive Summary only (October 2006)
- L13 DTI Energy White Paper "Meeting the Energy Challenge" (2007)
- L14 Speech made by John Hutton, SoS for Business, to the Fabian Society – 17 September 2007
- L15 Draft proposal from the EU Commission (January 2008)

- L16 Draft Renewable Energy Strategy: Executive Summary only (June2008)
- L17 Written Statement from the Energy Minister (Low Carbon Economy Summit - June 2008)
- L18 Speech by the Prime Minister (Low Carbon Economy Summit - June2008)
- L19 2020 Vision Report by the Renewables Advisory Board
- L20 Best Practice Guidelines for Wind Energy Development, BWEA (2004)
- L21 PAN 45 (2002) Renewable Energy Technologies

**M. Climate Change Documents**

- M1 H M G o v e r n m e n t "Climate Change: the UK Programme 2006" (March2006)
- M2 Intergovernmental Panel on Climate Change Fourth Assessment Report Climate Change 2007: Synthesis Report
- M3 Natural England's draft policy on climate change

**N. Landscape and Visual Documents**

- N1 The Countryside Agency "Landscape Character Assessment: Guidance for England and Scotland" (2002)
- N2 The Landscape Institute, Institute of Environmental Management and Assessment, 2002, "Guidelines for Landscape and Visual Impact Assessment", Second Edition
- N3 English Heritage "Wind Energy and the Historic Environment" (2005)
- N4 Produced for Scottish Natural Heritage by the University of Newcastle, "Visual Assessment of Wind farms: Best Practice"
- N5 Scottish Natural Heritage and The Countryside Agency "Topic Paper 5: Understanding Historic Landscape Character" (2004)
- N6 Scottish Natural Heritage and The Countryside Agency Landscape Character Assessment Series "Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity" (2004)
- N7 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)
- N8 INTENTIONALLY BLANK
- N9 Visual representation of wind farms. Good Practice Guidance(2006)
- N10 Designing Wind farms in the Landscape, Draft for Consultation, Scottish Natural Heritage, 2008
- N11 The Visual Issue, An Investigation technique into the technologies a n d M e t h o d o l o g y used in wind farm computer visualizations, April2007

**O. Noise**

- O1 ETSU-R-1997 The Assessment andRating of Noise from Wind Farms, DTI Working Group on Noise from Wind Turbines (1996)
- O2 British Standard BS4142 "Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas", British Standards Institute, HMSO 1997
- O3 ISO 9613-1 Acoustics – Attenuation of sound during propogation outdoors, Part 1
- O4 ISO 9613-2 Acoustics – Attenuation of sound during propogation outdoors, Part 2

**R. Cultural Heritage**

- R1 COLLCUTT, S.N. 1999. The setting of cultural heritage features. Journal of Planning & Environment Law. June 1999:498-513
- R2 Setting Standards: A review (IFA Working Group of the setting of



R3 cultural heritage features, April 2008)  
Conservation principles - Policies and guidance for the sustainable management of the historic environment (English Heritage, April 2008)

R4 Descriptions and scheduling of Listed Buildings and Ancient Monuments within 5Km of appeal site

**S. Aviation**

S1 "Wind Energy and Aviation interests, Interim Guidelines' Wind Energy, Defence & Civil Aviation Interests Working Group, ETSU W/14/00626/REP, DTI, 2002

S2 Civil Aviation Authority, CAP 764 'CAA Policy and Guidelines on Wind Turbines'

S3 Civil Aviation Authority, CAP 738 - Safeguarding of Aerodromes (excerpts only)

S4 Wind Turbines And Aviation Interests - European Experience And Practice, STASYS Ltd, ETSU W/14/00624/REP, DTI PUB URN No. 03/515, DTI, 2002

S5 Civil Aviation Authority, Safety Regulation Group, CAP 493: Manual of Air Traffic Services Part 1 (excerpts only)

S6 Civil Aviation Authority, Safety Regulation Group, CAP 670: Air Traffic Services Safety Requirements, Part B, Section 4, GEN 01, 12 June 2003 (excerpts only)

S7 Civil Aviation Publication, CAP 168: Licensing of Aerodromes (excerpts only)

S8 Civil Aviation Authority, Safety Regulation Group, CAP 428: Safety

S9 Standards at Unlicensed Aerodromes, October 2004 (excerpts only) UK Aeronautical Information Publication entry for Manston

S10 AA Safety Regulation Group, CAP 774: UK Flight Information Services, Civil Aviation Authority, Safety Regulation Group 12 June 2008

**T. Other**

T1. The BWEA handout/press release dated 29 November 2007 re the Advertising Standards Agency report on CO2 savings

T2 SPP6

T3 British Horse Society Guidance on Wind farms

T4 A short history of Guston (M.E. Bodiam)

T5 Saint Martin of Tours - Guston Parish Church History

T6 East Langdon and Martin (Major G.S. Johnson)

T7 A history of St Augustine's church, East Langdon

T8 Langdon Primary School, consultation report 8<sup>th</sup> June 2006 (Dr Alan F Snoad)

T9 St Mary's Church, West Langdon

T10 A history of Whitfield (Rev. 3 Howard Brown)

Document 6 Statement of Common Ground between Ecotricity Group Ltd and Dover District Council

Document 7 Statement of Common Ground between Ecotricity Group Ltd (5 January 2009 version) and NATS and covering letter dated 12 December 2008

Document 8 Statement of Common Ground between Ecotricity Group Ltd and Infratil on Aviation Matters - Radar

Document 9 Working drafts of planning conditions, dated 21 January 2009, 5 February 2009 and 9 February 2009.

Document 10 Inspector's notes on documentation, dated 26 January 2009.

- Document 11 Inspector's initial comments on working drafts of conditions, dated 27 January 2009
- Document 12 Suggested site visit itineraries

### **Council Documents**

- Document 13 Council's opening statement
- Document 14 Letter from Terence O'Rourke to PINs dated 11 November 2008 (referred to in Council's opening statement).
- Document 15 Ms Kaner's Proof of evidence and Summary*
- Document 16 Ms Kaner's Appendices*
- Document 17 Appeal Decision A2066130 – residential development at Franconia, The Droveaway, St Margaret's Bay.
- Document 18 "Renewable Energy Technologies in the English Countryside", February 1994 (whole document).
- Document 19 Mr Trehy's Proof of evidence and Summary*
- Document 20 Mr Trehy's Appendices*
- Document 21 Visitor figures for Dover Castle (including The Keep).
- Document 22 Extract from Institute for Archaeologists' Standard and Guidance for desk-based assessment, revised October 2008.
- Document 23 Extract from Institute for Archaeologists' Standard and Guidance for Stewardship of the Historic Environment, September 2007.
- Document 24 Good Practice Guide to managing risk and maximising benefit when dealing with archaeology and development.
- Document 25 Bundle of plans indicating numbers of properties within 1, 2 and 5 km of each turbine and calculation sheets.
- Document 26 Plans and bundle of lists of properties within 820 m of each turbine (submitted at Inspector's request).
- Document 27 List showing distances of Little Pineham Farm, Enifer Downs Farm and Langdon Court from the nearest turbines to them.
- Document 28 Dr A Farahmand-Razavi's proof*
- Document 29 Bundle of plans, letters and e-mails dated 12-13 January 2009 seeking to establish division of trunk road and County highway networks at Whitfield roundabout and width of highway in Archers Court Road (submitted at Inspector's request)
- Document 30 Bundle of e-mails relating to turbine lighting, up to 10 December 2008.
- Document 31 Mr Jensen's Proof of evidence and Summary*
- Document 32 Mr Jensen's assessment of background noise levels using regression line formulas based on figures in 2007 ES - tables.
- Document 33 Mr Jensen's assessment of background noise levels using regression line formulas based on figures in 2007 ES - graphs.
- Document 34 Combined graphs for the 5 representative receptors daytime/night time (Pineham Farm daytime adjusted).
- Document 35 Mr Miller's Proof of evidence and Summary.*
- Document 36 Mr Miller's Appendices.*
- Document 37 GOSE correspondence on saved policies in SP (relevant to SLA).
- Document 38 SP Panel report on Local Landscape designations.
- Document 39 Extract from Stilton Wind Park ES, dealing with site selection
- Document 40 Renewable energy Schemes in the Pipeline in Kent 22 January 2009.

- Document 41 BBC news report on Eurotunnel bid for Dover Strait to become World Heritage site.
- Document 42 Assessment of ES Shadow Flicker Report, November 2008.
- Document 43 Swale Council report on Port of Sheerness wind turbine proposal.
- Document 44 Responses to Inspector requests for further information
- Document 45 Ecotricity Good Neighbour policy and press release on North Dover
- Document 46 Plan showing wind speed relative to designated areas in Dover District.
- Document 47 Memo from Ramboll to Council detailing Mr Jensen's comments on proposed noise conditions.
- Document 48 Council's closing statement.

### **Appellant Documents**

- Document 49 Mr Houghton's Opening Statement
- Document 50 Plan showing application site outlined in red and land under control of Appellant outlined in blue (submitted at the Inspector's request).
- Document 51 Mr David's Proof of evidence*
- Document 52 Mr David's Summary*
- Document 53 Mr David's Appendices*
- Document 54 Mr David's Figures*
- Document 55 Mr David's Rebuttal evidence*
- Document 56 Six plans showing shadow flicker receptors by sector
- Document 57 Amended Viewpoints A7 for 5 and 4 turbine schemes.
- Document 58 Extract from "Renewable Energy Technologies in the English Countryside", February 1994.
- Document 59 Extended photomontage A19 and explanatory note
- Document 60 Bundle of e-mail correspondence with Energy Defence Estates concerning turbine lighting.
- Document 61 Mr Collett's Proof of evidence*
- Document 62 Drawing numbered 67.90.001-0 showing generator transport by turnable trailer.
- Document 63 Mr McKenzie's Proof of evidence*
- Document 64 Mr McKenzie's Summary*
- Document 65 Mr McKenzie's Appendices*
- Document 66 Mr McKenzie's Rebuttal proof of evidence*
- Document 67 Mr McKenzie's noise and wind time histories Appendices*
- Document 68 Evidence to Mountboy wind farm by Mr Bowdler
- Document 69 Sound Power levels for E-82 turbine and noise safety factor.
- Document 70 Mr Spaven's Proof of evidence*
- Document 71 Mr Spaven's Summary*
- Document 72 Mr Spaven's Appendices*
- Document 73 Radar plots across East Kent and Channel.
- Document 74 CAA consultation document on proposal for incremental expansion of transponder use in UK airspace.
- Document 75 Stakeholder Consultation by NATS on proposal for controlled air space at Stansted.
- Document 76 Mr James's evidence to the Steadings Wind Farm Inquiry 18 January 2008.

- Document 77 E-mail exchange between Mr Smith and Mr Spaven , June 2007.  
*Document 78 Mr Stewart's Proof of evidence*  
*Document 79 Mr Stewart's Appendices*  
Document 80 Written rebuttal submission on White Doves of Dover  
Document 81 Responses to Inspector requests for further information  
Document 82 Plan of swept path for turbine vehicle.  
Document 83 Note on draft conditions by Ecotricity – 5 February 2009  
Document 84 Mr Houghton's Closing Statement.

### **Parish Councils' Documents**

- Document 85 Parish Councils' opening statement.  
*Document 86 Three bound volumes of witness proofs and, statements and appendices.*  
*Document 87 Ring binder containing Parish Councils' Core Documents*  
Document 88 Summary of Mr Leach's evidence.  
Document 89 Summary of Mr Walters's evidence.  
Document 90 Mr Moor's supplementary photographs  
Document 91 Four photographs of the Dublin spire accompanying Mr Clayson's evidence  
Document 92 *Script of Mr Sencicle's evidence.*  
Document 93 Mr Sencicle's letter of appointment.  
Document 94 Extract from Definitive Rights of Way Map for Langdon area.  
Document 95 Letter from Mr G Sencicle, dated 3 January 2009.  
Document 96 Request from Mr Walters for Inspector to visit Bowerfield Farm Kennels, dated 8 January 2009.  
Document 97 List prepared by Mr Walters to show numbers of properties within 820 m of turbines, categorised by village.  
Document 98 Comments on proposed conditions.  
Document 99 Parish Councils' closing statement.

### **LAG's Documents**

- Document 100 LAG's opening statement.  
Document 101 Two bound volumes of wind farm appeal decisions.  
*Document 102 Ms Bolger's Proof of evidence.*  
*Document 103 Ms Bolger's Appendices.*  
Document 104 Appeal decision A2047477 - Aston Grange Farm Wind Turbines, Cheshire.  
Document 105 Kent Downs AONB Management Plan "Final Text approved for Adoption", dated October 2008.  
Document 106 *Mr Hyde's Proof of evidence and Appendices.*  
Document 107 Plan showing locations of LAG's photographs.  
Document 108 Reports of blade fracture of Conisholme turbine and ice-shedding at Whittlesey turbine.  
Document 109 *Mr Stigwood's Proof of evidence and Summary.*  
Document 110 Mr Stigwood's response to Dr McKenzie's evidence and rebuttal.  
Document 111 Mr Pound's written submission.  
Document 112 Mrs Pound's written submission.  
Document 113 Ms Baker's written submission.  
Document 114 Conditions note for Inspector

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Document	115	Comments on proposed conditions.
Document	116	Extract from Guardian Newspaper 7 November 2008.
Document	117	MAS Environmental – alternative approach to conditions as suggested by the Inspector.
Document	118	MAS Environmental -the enforceability and reasonableness of wind farm conditions
Document	119	LAG's closing statement.

### **Infratil Documents**

<i>Document</i>	120	<i>Mr James's Rebuttal Proof of evidence.</i>
Document	121	Extract from Mr James's evidence to the Shipdam wind turbine Inquiry.
Document	122	Lower Airspace Radar Statistics.
<i>Document</i>	123	<i>Mr Thompson's Proof of evidence of evidence.</i>
<i>Document</i>	124	<i>Mr Thompson's Appendices.</i>
<i>Document</i>	125	<i>Mr Leitch's Proof of evidence of evidence.</i>
Document	126	Infratil's Core Documents, as follows:
	KIA1	Civil Aviation Authority, CAP 168: Licensing of Aerodromes - Cover Page and Chapter 1
	KIA2	Civil Aviation Authority, CAP 393: Air Navigation: the Orders and Regulations -Cover Page, Parts 9-10 & 12-14 of Section 1 and Sections 1-6 of Schedule 1 of Section 2.
	KIA3	Civil Aviation Authority, Safety Regulation Group, CAP 493: Manual of Air Traffic Services - Cover Page, Sections 1, 3 & 5 and Chapter 2 of Section 8.
	KIA4	Civil Aviation Authority, CAP 670: Air Traffic Safety Requirements - Cover Page, Part A and Part B.
	KIA5	Civil Aviation Authority, CAP 738: Safeguarding of Aerodromes.
	KIA6	Annex 11 to the Convention on International Civil Aviation; International Civil Aviation Organisation (ICAO) - Cover Pages, Paragraph 2.2 of Chapter 2, Paragraph 2.6 of Chapter 2.
	KIA7	Manual of Air Traffic Services (MATS) Part 2 - Section 2 and Chapters 1, 2 and 3 of Section 4.
	KIA8	The Future of Air Transport (Aviation White Paper) dated December 2003 - Cover Page, Paragraphs 11.93, 11.95 & 11.99.
	KIA9	The Future of Air Transport Progress Report dated December 2006 - Cover Page, Paragraphs 1.12, 4.11 & 5.5.
	KIA10	The Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosive Storage Areas) Direction 2002.
	KIA11	Royal Air Force Air Warfare Centre: The. Effects of Wind Turbine Farms on ATC Radar, 10 May 2005.
	KIA12	United States Department of Defense Report to the Congressional Defense Committees: The Effect of Windmill Farms on Military Readiness, 2006.
	KIA13	Appeal Decision IEC/3/73 on application for 85 turbine development at Kyle Forest, east Ayrshire.
	KIA14	Kent International Airport - Manton Draft Master Plan dated October 2008.
	KIA15	Civil Aviation Authority , CAP 764 'CAA Policy and Guidelines on Wind Turbines' [updated version from July 2006 document included with Core Documents, as yet unpublished although proof read and in final form, produced with permission of the CAA; publication expected in early February 2009]
	KIA16	Annotated aviation map of the South East of England (including Kent International Airport and the appeal site)
	KIA17	Letter from the Civil Aviation Authority to the Dover District

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		Council dated 5 December 2008
	KIA18	Letter from the Civil Aviation Authority to the Dover District Council dated 18 December 2008
Document	127	Letter dated 9 February 2009 containing comments on proposed conditions.
Document	128	Infratil's closing statement.

### **Third Party Documents**

Document	129	Bundles of third party representations received at application and appeal stage, prior to the opening of the Inquiry.
Document	130	Bundle of third party representations received in response to SEI (circulated to the parties by the Inspector at the Inquiry).
Document	131	Letter dated 9 January 2009 from Highways Agency to PINs proposing its representations be dealt with through planning conditions rather than Inquiry appearance.
Document	132	Two e-mails supporting the proposal (from Ms Bateman and Mr Kinrade)
Document	133	Letter dated 24 November 2008 setting out National Trust objection to the proposal in light of SEI.
Document	134	E-mail dated 12 January 2009 from Mr A Sencicle
<i>Document</i>	<i>135</i>	<i>Script of Mr Thomas's evidence to the Inquiry (appearance)</i>
<i>Document</i>	<i>136</i>	<i>Script (e-mail 14 January 2009) of Mr Sencicle's evidence to the Inquiry (appearance)</i>
Document	137	Letter dated 16 January 2009 from English Heritage, indicating no comments on this occasion.
<i>Document</i>	<i>138</i>	<i>Script of Mr Smith's evidence to the Inquiry (appearance)</i>