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## Penderfyniad ar yr Apêl

Ymchwiliad a gynhaliwyd ar 18/10/11 –  
25/10/11

Ymweliad â safle a wnaed ar 26/10/11

gan **A D Poulter BA BArch RIBA**

**Arolygydd a benodir gan Weinidogion Cymru**

**Dyddiad: 14/12/11**

## Appeal Decision

Inquiry held on 18/10/11 – 25/10/11

Site visit made on 24/10/11

by **A D Poulter BA BArch RIBA**

**an Inspector appointed by the Welsh Ministers**

**Date: 14/12/11**

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**Appeal Ref: APP/L6940/A/11/2147835**

**Site address: Land at Mynydd Pwllyrhebog, South of Clydach Vale, North West of Gilfach Goch.**

**The Welsh Ministers have transferred the authority to decide this appeal to me as the appointed Inspector.**

- The appeal is made under section 78 of the Town and Country Planning Act 1990 against a refusal to grant planning permission.
  - The appeal is made by NPower Renewables Limited against the decision of Rhondda Cynon Taff County Borough Council.
  - The application Ref 06/1842, dated 17 August 2006, was refused by notice dated 11 February 2011.
  - The development proposed is the proposed erection of seven wind turbines to form part of the Fforch Nest wind farm, with associated tracks, masts and extra stretch of bridleway.
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### Decision

1. The appeal is allowed and planning permission is granted for the proposed erection of seven wind turbines to form part of the Fforch Nest wind farm, with associated tracks, masts and extra stretch of bridleway at Land at Mynydd Pwllyrhebog, South of Clydach Vale, North West of Gilfach Goch, in accordance with the terms of the application, Ref 06/1842, dated 17 August 2006, and the amended plans and documents submitted with it, subject to the schedule of 22 No conditions attached at Appendix A.

### Preliminary and Procedural Matters

2. In addition to the accompanied visit to the site and surrounding areas carried out on 26 October, I undertook unaccompanied visits within Gilfach Goch, Clydach Vale and the wider area, both before and after the Inquiry. Weather conditions during the accompanied inspection and at other times were favourable.
3. The description above reflects that on the application form. NPower Renewables Limited changed its name to RWE NPower Renewables Limited in 2009. It is common ground that the proposal would comprise 7 wind turbines as part of a wind farm totalling 11 turbines, which together would be known as Fforch Nest. Planning permission has been granted for the other 4 turbines, which would be on adjacent land within the Bridgend administrative area. There would be one transformer per turbine, and a 70m high anemometer mast. The turbines would be connected by underground cabling to a sub-station on the adjacent land within Bridgend. Each turbine would have a maximum height (to blade tip) of 115m. The drawings and

documents that accompanied the application (as amended) are listed in the Statement of Common Ground.

4. The application was supported by an Environmental Statement (ES) produced in accordance with the 1999 Regulations<sup>1</sup>. Comments were received from statutory bodies and other interested persons about the ES and the likely environmental effects of the proposed development. The ES assesses the proposal on the basis that planning permission, if granted, would be for a limited period of 25 years of operation, after which the wind farm would be decommissioned and dismantled, and the site would be reinstated. Supplementary Environmental Information (SEI) has been published on several occasions since, as a consequence of design changes including a reduction in the height of the proposed turbines from 135m to 115m, and in response to requests for additional information. The latest SEI was published in August 2011, following a Pre-Inquiry Meeting to agree procedural arrangements. It comprises additional Landscape and Visual Figures, Assessment of Views from Residential Properties, and Cumulative Wind Farm Information. It was published and publicised in accordance with the regulations. I have taken this environmental information into account, along with other environmental information submitted in evidence to the Inquiry, in arriving at my Decision.
5. Planning permission was granted for the Bridgend part of the Fforch Nest wind farm (Forch Nest Bridgend) in May 2011<sup>2</sup>. Planning permission has also been granted<sup>3</sup> for a joint access track (JAT) within the Bridgend administrative area to serve the Fforch Nest wind farm and a separately promoted wind farm of 10 turbines, known as Pant y Wal. The Pant y Wal site is split either side of the Bridgend section of the Fforch Nest wind farm and would comprise 10 turbines of similar size to those proposed for Fforch Nest. If the Fforch Nest Bridgend and the Pant y Wal turbines are built the turbines that are the subject of this appeal would appear visually as part of a single 21 turbine wind farm, rather than as one of three separate developments. For clarity, I shall refer to the appeal scheme as Fforch Nest Rhondda Cynon Taf (RCT) where appropriate.
6. I have, as required, considered the individual merits of the appeal scheme in the light of the development plan for the area and other material considerations. These include cumulative effects with other planned, proposed and constructed wind farm developments. I have attached weight to other wind farm developments in accordance with the stage they have reached in the development process. Thus, for example, I have attached relatively little weight to the prospect that the existing Taff Ely wind farm will be rebuilt ('re-powered'), as the proposal is at the pre-application (scoping) stage and it is far from clear that it will proceed. On the other hand, planning permission has been granted for a wind farm known as Mynydd Portref, to the East of the Taff Ely wind farm. I was informed at the Inquiry that some conditions remained to be discharged. However, as the project is at an advanced stage and likely to proceed it is a consideration to which I have attached substantial weight. Work commenced on the Pant y Wal scheme and the associated JAT during the course of the Inquiry. The Fforch Nest Bridgend proposal is also well advanced, though work

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<sup>1</sup> The Town and Country Planning (Environmental Impact Assessment)(England and Wales) Regulations 1999, as amended.

<sup>2</sup> Ref P/06/1080/FUL

<sup>3</sup> Ref P/08/962/FUL

has not yet commenced. In the absence of further applications the appeal scheme would be dependant on the JAT and Fforch Nest Bridgend schemes for access and a grid connection. In these circumstances it is almost inconceivable that the appeal scheme would proceed in the absence of the Pant y Wal and Fforch Nest schemes. For these reasons I therefore attach very substantial weight to them.

7. During the Inquiry the appellant submitted a completed Planning Obligation by Deed of Agreement under Section 106 of the Act. In accordance with the Second Schedule, the developers and owners covenant to establish an account for the purpose of securing the restoration of the site, to undertake TV reception studies, to submit details of works necessary to mitigate any adverse effects to domestic TV signals, and to implement mitigation measures where found to be necessary. There is no dispute that the obligation meets the tests set out in Welsh Office Circular 13/97: *Planning Obligations*, national planning policy set out in *Planning Policy Wales* (PPW) (Edition 4 February 2011) and the *Community Infrastructure Levy Regulations 2010*. I have no reason to disagree. It is therefore a consideration to which I attach significant weight.

### Main Issue

8. The main issue is the effect of the proposed development on the character and appearance of the area, having particular regard to cumulative effects and local and national planning policies. Local residents are also concerned about a range of other issues including noise, safety, traffic generation, wildlife, rainwater run-off, and ground stability.

### Reasons

9. The appeal site is an area of open upland coalfields plateau which is used as rough pasture. It is largely open access land. Public rights of way across the site include a footpath and a bridleway. The site is not the subject of any statutory landscape or ecological designations and there are no designated Scheduled Ancient Monuments within it. It does, however, form part of the Rhondda Landscape of Special Historic Interest (Rhondda LSHI), which is included within the *Register of Landscapes of Special Historic Interest in Wales* (the Register). It is bounded to the north by the Cwm Clydach Forest and to the South by streams at the head of the Ogwr Fach valley. There are extensive views from the site across the South Wales upland plateau and down the Ogwr Fach valley towards Gilfach Gogh and beyond.

### Policy Context

10. The policy context has changed since the application was refused, with the adoption of the *Rhondda Cynon Taf Local Development Plan* (LDP, March 2011). This is now the statutory development plan for the area. LDP Area Wide Policies AW6 and AW7 are general policies relating to good design, placemaking, and protection and enhancement of the built environment, including sites of historical merit and archaeological importance. Policy AW10 relates to environmental protection and public health, including noise. The most relevant policies are, however, AW12 and AW13 which relate respectively to renewable and non-renewable energy and large wind farm development. Policy AW12 is generally supportive of wind energy proposals provided that there would be no unacceptable effect upon interests including soil conservation, agriculture, nature conservation, wildlife, natural and cultural heritage, landscape importance, public health and residential amenity. Policy AW13 permits large wind farm developments where they would be within the boundaries of a Strategic Search Area (SSA), sited on predominantly flat extensive areas of upland,

and at generally least 500m from the nearest residential property, provided that the proposal would not have an unacceptable effect on the visual quality of the wider landscape as a consequence of its siting, scale or design. Large wind farm proposals are also required to minimise the loss of, and where possible enhance public accessibility to the countryside, not to have unacceptable impacts on sites designated for their nature conservation value, and to protect the natural beauty and special qualities of the Brecon Beacons National Park. Of these specific policies, as the turbines to which the appeal relate would be large in scale and part of a wider wind farm well in excess of 25MW installed capacity, I consider AW13 to be the most relevant. I shall however consider the proposal against both.

11. The Area Wide policies of the LDP are to be read in conjunction with national planning policies as the basis for the determination of planning applications in the Borough<sup>4</sup>. Paragraphs 12.8.6-11, 12.8.13-14, and 12.10.1 of PPW contain statements of national development control policy which should not need to be repeated as local policy in LDPs. These support all forms of renewable and low carbon energy development where impacts are avoided and where possible minimised.
12. Technical Advice Note 8: *Planning for Renewable Energy* (TAN 8, July 2005) supplements PPW and is to be taken into account in the determination of appeals in Wales. It identifies SSAs where, for efficiency and environmental reasons amongst others, large scale (over 25MW) onshore wind developments should be concentrated. There is no dispute that the appeal site is entirely within SSA Area F: Coed Morganwg. A refinement study of SSAs E and F has been carried out for a consortium of South Wales Valleys Authorities including Rhondda Cynon Taf County Borough Council<sup>5</sup>. It is not adopted policy or guidance, but provides useful advice relating to refinement of the 'broad brush' scale of the boundaries of SSAs shown on the TAN 8 maps. The appeal site is included within an area advised within the refinement study to be suitable for large scale wind turbines.
13. A letter from the Minister for Environment and Sustainable Development to Colleagues, dated July 2011, confirms the Welsh Government's commitment to pursuing the aspirations set out in *A Low Carbon Revolution*<sup>6</sup>, which identifies Wales' sustainable renewable energy potential to 2020/2025 and identifies onshore wind as currently the most viable technology. The potential estimated in *A Low Carbon Revolution* is based on the maximum capacities considered appropriate for the SSA's in TAN 8 in 2005. The letter provides further clarity on the issue of maximum capacities for onshore wind within the SSA's. The identified maximum capacity for SSA F, based on an assessment by independent consultants Garrad Hassan which informed TAN 8, is 430MW.
14. During the Inquiry I drew the parties' attention to *Conservation Principles for the Management of the Historic Environment in Wales*<sup>7</sup>, which sets out a logical approach for making decisions about all aspects of the historic environment. It is not part of

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<sup>4</sup> LDP, paragraph 5.4.

<sup>5</sup> Ove Arup and Partners Limited December 2006

<sup>6</sup> A Low Carbon Revolution: The Welsh Assembly Government Energy Policy Statement, March 2010.

<sup>7</sup> Cadw, March 2011.

local or national planning policy, but it is produced by the Welsh Government's historic environment service. As such it carries significant weight.

## Landscape and Visual Effects

15. The LANDMAP information system is endorsed as an important resource that provides a consistent Wales-wide approach to landscape assessments, and can be drawn upon to inform local policy, guidance and decision making<sup>8</sup>. It covers several aspects of the landscape, including visual and sensual, historic and cultural 'layers'.
16. Wind farm appeal decisions in Wales have often referred back to an Inspector's report dating from 2004<sup>9</sup>. It describes turbines as being 'prominent' when they are easily seen and identified without the need for close examination of the landscape. Turbines that are not just visible, but draw the eye to the extent that little else is seen, even in an attractive landscape, are described as 'dominant'. A turbine is described as 'overwhelming' if it is so close and of such a size, as to be likely to make the observer uncomfortable and want to move away. These are useful definitions and I have adopted them in this decision. However, although turbines may be prominent, dominant or overwhelming when seen from particular viewpoints, this does not necessarily imply that they would cause unacceptable harm, as landscape and visual effects must be weighed in the balance with other considerations. Similarly, the scales of significance developed in methodologies to assess landscape and visual impacts for the purposes of Environmental Impact Assessments are a useful guide to comparative degrees of impact, but a high or even severe rating would not necessarily imply that an effect would be unacceptable.
17. Visual effects may be modified by factors such as the openness or channelling of views, and the sensitivity of the landscape or people ('receptors') experiencing those views. It is therefore not possible to define distances at which turbines would be prominent, dominant or overwhelming, though there is a close correlation between the degree of visual impact and distance.
18. In this instance there is no dispute that the appeal scheme would have significant effects on the visual and sensory aspects of the landscape, and I have no reason to disagree. There is little difference between the Council's and appellant's expert landscape witnesses with regard to the magnitude of those effects, though Mr Sinclair, the main witness for the Green Valley Action Group (GVAG), has assessed them to be higher in some instances. These effects would be greatest within the site itself. In accordance with LANDMAP visual and sensory data the appeal site has qualities of exposure and wildness. It is given an overall 'high' evaluation as an attractive largely unspoilt upland area with a strong sense of place and good views. I concur with that evaluation. The appellant's landscape witness has acknowledged in her evidence that changes to a rural landscape involving the construction of manmade objects of large scale are generally considered to be negative. In my view the proposed development would have a negative effect on the wildness of the site and its natural beauty. When seen and experienced from within the site or from nearby, the size of the proposed turbines, and particularly the movement of the blades, would make many observers uncomfortable and want to move away. In this area the proposed turbines would

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<sup>8</sup> PPW, paragraph 5.3.13

<sup>9</sup> Report APP/T6850/A/03/1122720, Llethercynon Wind Farm, July 2004.

therefore be overwhelming. There would be consequences for the recreational enjoyment of the site and walks through the countryside, to which I shall return.

19. The upper part of Clydach Vale and the surroundings of Gilfach Goch have been reclaimed from industrial dereliction. In particular, the upper part of Clydach Vale is now a tranquil area, returning to nature, which is primarily used for recreational purposes. It includes a country park and a miners' commemorative memorial. The valley sides are largely forested. Parts of the proposed Fforch Nest (RCT) turbines would be seen in views from the entrance to the park, walks along the valley bottom, and on the opposite valley sides. With reference to wire-frame diagrams and topographical features agreed with the landscape consultants I was able to establish that they would be prominent. However, the proposed turbines would be set back far enough from the edge of the plateau for them not to loom over the valley. The circumstances in this instance are therefore very different to those in the 'Hirwaun' appeal<sup>10</sup>, in which the Inspector concluded that the proximity of several of the turbines to the plateau edge would mean that they would draw attention away from the imposing land form and reduce its apparent scale. Large parts of the country park and the upper part of Clydach Vale, including the memorial site, would be in 'visual shadow' even if the commercial forestry on the valley slopes were to be felled. I do not consider that the proposed turbines would occupy such a large part of the field of view that they would draw the eye to the extent that little else would be seen, even though the blades would turn. I therefore do not consider that they would be dominant, or that their presence would seriously diminish the appreciation of the natural beauty of the dramatic step valley sides, regenerating vegetation, and associated wildlife within Clydach Vale.
20. It is clear from many of the representations made by local residents that the upland areas of the valley sides and plateau 'tops' are highly valued as the 'green lungs' of the densely settled valley bottom communities. They are also attractive to visiting walkers, and so add to the tourism potential of the area. To promote health and wellbeing and the enjoyment of the uplands, a number of circular walking routes are now promoted. When seen from the sections of these routes close to the appeal site the proposed turbines would be dominant. Within and immediately adjacent to the appeal site they would be overwhelming. I accept that as a consequence many people would plan walks to avoid the appeal site, or would choose not to linger if they do decide to pass through. However, other nearby areas of upland would remain accessible, and access to and through the appeal site would remain available to those wishing to visit or pass through. There is no firm evidence that the proposed development would harm economic regeneration or tourism. Although the proposed turbines would be prominent in views from large sections of these routes the same is true of other wind farms near public rights of way. In these circumstances I do not consider that the effect of the proposed development on the enjoyment of the countryside would be so significant that it should be an overriding consideration in this appeal.
21. The proposed turbines would be seen from some densely developed areas and so would have an impact on many peoples' daily lives. The effects would be greatest towards the northern end of Gilfach Goch and in elevated streets at the western end of Clydach Vale. The effect on visual amenity (visual impact) within a 2Km study radius has been assessed within the latest SEI as ranging from 'negligible' to 'major' at some

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<sup>10</sup> Appeal Ref APP/L6940/A/07/2058755

locations. Mr Sinclair has assessed the effect as being 'major' in more places, but his assessment of the 'worst case' effect does not differ greatly from the SEI.

22. In my opinion some of the greatest effects on residential amenity would be experienced in and around the terrace known as 'Fair View' towards the northern end of Gilfach Goch. Although Fair View is outside the 2Km study radius, this terrace is in an elevated position with uninterrupted views along the street and from gardens towards the Fforch Nest wind farm. The orientation would be such that the proposed Fforch Nest (RCT) turbines would extend the field of view occupied by turbines to include an area that would otherwise be seen as open grassland. Even so, the proposed turbines would be prominent, rather than dominant. There are residential areas that are closer to the appeal site than Fair View, including the northern end of the High Street in Gilfach Goch and parts of Clydach Vale. However, in these areas there would be other features in the street scene and landscape that would draw the eye from or screen the proposed turbines. The topography of the landscape would be such that the proposed Fforch Nest RCT turbines would not be seen from large parts of Gilfach Goch. At no viewpoint within the built-up areas of Gilfach Goch or Clydach Vale do I consider that the proposed Fforch Nest (RCT) turbines would be so dominant that they would have an unpleasantly overwhelming and unavoidable presence in views on their own, or in combination with the consented Fforch Nest (Bridgend) and Pant y Wal turbines. I therefore do not consider that they would have an unacceptable effect on residential amenity.
23. In reaching this view I am mindful that many local residents see the proposed development as a re-industrialisation of the landscape which would reverse the return of their 'green valley'. The site also has mythic and cultural associations dating back to long before the era of coal mining which contribute to communal identity. However, wind turbines are a clean and 'green' technology, far removed from the grime and waste tips associated with coal mining, and the land would be relatively easily and quickly restored when the development reaches the end of its useful life. Whilst I have given weight to concerns about re-industrialisation, it is therefore reduced.
24. People entering Gilfach Goch must pass close to the Taff Ely wind farm, which dominates some views along the approach roads and is prominent in views from the southern and eastern parts of the settlement. Residents and visitors are therefore made acutely aware of the presence of wind turbines in the landscape as they go about their daily lives. It is likely that wind turbines will become an even more prominent part of the local landscape with the construction of the Pant y Wal, Fforch Nest (Bridgend), and Mynydd Portref turbines. The appeal scheme would add further to the number of turbines that would be seen. However, the topography is such that there would be few viewpoints within the built-up area from which the proposed Fforch Nest (RCT) and the existing Taff Ely turbines would be visible from the same place. There would be no turbines within large areas of the surrounding uplands. Although other applications may come forward for wind farms within these areas they would be considered on their individual merits at that time. For these reasons I do not consider that the appeal proposal would create an unacceptable sense of encirclement and being surrounded by wind turbines.
25. The coalfields plateau is already punctuated by a number of wind farms. A Cumulative Zone of Theoretical Visibility map (CZTV) included within the SEI is unchallenged. It indicates that up to 17 wind farms will be visible from many parts of the plateau if all other envisaged proposals proceed. The character of the wider uplands landscape has

therefore been changed by the construction of existing wind farms and is likely to change further, with large scale wind farms becoming an integral part of its character. In this context I do not consider that the proposed Fforch Nest (RCT) turbines would look out of place, or would have significantly harmful effects on the character of the wider uplands landscape.

26. In accordance with LANDMAP data, the historic landscapes of the Rhondda Uplands and Rhondda Settlement corridor and the cultural landscape of the Rhondda are of outstanding value. The Rhondda Uplands are remarkably well preserved and contain evidence of human activity dating back to the Mesolithic era. The Rhondda settlement corridor represents the product of an exceptional period of industrial growth. The cultural landscape of the Rhondda is outstanding because of the area's contribution to the image of industrial development and to the external perception of South Wales.
27. The importance of the historic landscape of the Rhondda is recognised in its inclusion within the Register of Historic Landscapes in Wales (the Register). As described in the entry in the Register, massive development in the latter part of the 18<sup>th</sup> and early part of the 20<sup>th</sup> centuries resulted in new communities being rapidly developed. Constrained by the tight topography of the valleys, a new landscape of highly distinctive communities was shoehorned into the limited land available. From the 1920 onwards extensive tracts on the valley sides and on the ridge above were planted with coniferous trees to supply pit props. As confirmed in the summary of the entry in the Register, the significance of the Rhondda therefore lies largely in the mining conurbations and the communities of distinctive terraced housing and other buildings therein. In accordance with national planning policy, the Rhondda LSHI should be protected, and information in the Register should be taken into account when considering the implications of developments which are such a scale that they would have more than a local impact<sup>11</sup>.
28. An *Assessment of the Significance of Development on Historic Landscapes* (ASIDOHL) survey has been carried out by consultants for the appellant and is included in the SEI. It covers all 11 turbines within the proposed Fforch Nest wind farm and takes recognised good practice into account<sup>12</sup>. It considers the effect on individual character areas and the greater, cumulative effect of these impacts, and concludes that the reduction in the value of the special historic landscape as a whole can be categorised as of slight significance. The ASIDOHL has been criticised for underscoring some elements, discrepancies, and particularly for omitting an assessment of the visual impacts on the Cwm Clydach historic landscape character area (HLCA 007)<sup>13</sup>. It has, however, also been studied by Cadw. Generally, Cadw did not disagree with the conclusions of the ASIDOHL and had no serious concerns with regard to the impact of the proposed development on the historic landscape.
29. The ASIDOHL scoring process requires judgements that may reasonably differ between professionals. The differences that exist between the appellant's and the Council's consultants in this respect therefore do not seriously undermine the

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<sup>11</sup> PPW, paragraph 6.5.24

<sup>12</sup> Oxford Archaeology, April 2009 / Guide to Good Practice on Using the Register of Historic Landscapes of Historic Landscapes in Wales, 2007

<sup>13</sup> Assessment by Richard S Kelly for John Campion Associates Limited: Appendix 1 to Mr Campion's Statement of Evidence.

ASIDOHL's conclusions. The discrepancies that have been noted would have some effect on the overall assessment, and it seems to me that the indirect visual effects of the proposed development on the Clydach Vale character area should have been included in the ASIDOHL. However, the visual impact of the proposed development when seen from Clydach Vale has been assessed in the latest SEI, and I can take the indirect visual effects on the historic landscape into account.

30. I have no evidence that the appeal scheme would have direct impacts on any known archaeological features or historic monuments. The possible discovery of significant archaeology during construction can be mitigated by conditions relating to archaeological investigations and 'micrositing' of turbine positions. I saw that there would be no significant impacts on field patterns or associated field boundaries within the appeal site. The proposed development would not affect the pattern of development in the densely developed parts of the valley, the layout of the forestry, or relic landscape features associated with coal mining such as former tips. It would therefore not affect the key features of the historic landscape that make it significant. From some viewpoints in Clydach Vale the proposed turbines would be prominent, and more than a relatively minor feature on the horizon. There would therefore be a significant indirect effect on this character area. However, as the proposed turbines would not be seen from large parts of the Rhondda LSHI, the indirect effect on the Rhondda LSHI as a whole would be very small.
31. For these reasons I agree with the ASIDOHL's conclusions that the proposed development would have a very slight direct physical impact, and that the reduction in the value of the special historic landscape as a whole can be categorised as of slight significance.
32. I do not consider that the Fforch Nest (RCT) scheme would take the cumulative effect of wind turbines on the Rhondda LSHI over a 'tipping point' whereby its historic character would be unacceptably changed from that described on the register. Rather, as with the effect of change on any other heritage asset, the change in the character of the landscape needs to be balanced against other considerations in order to determine whether the effect would be acceptable. I shall turn to the balancing exercise later, in the light of planning policy and guidance.

## **Other Considerations**

### Noise

33. The ES presents an assessment of the impact of both construction and operational noise from the proposed Fforch Nest Wind Farm, in accordance with the methodology set out in the report *The Assessment and Rating of Noise from Wind Farms*, known as ETSU-R-97. The conclusions are not disputed by the Council. However, the conclusions relating to construction noise are disputed by the residents of a property known as Cae Rosser Isaf, which is close to the route of the JAT. The conclusions relating to the impact of the operational noise are not accepted by all local residents. In particular, Mr J Jenkins, an independent objector, presented evidence relating to noise at the Inquiry. He confirmed that he does not hold professional qualifications relating to environmental noise, though it was clear from his submissions that he has researched the issues around wind farm noise in some considerable depth. The response for the appellant was given by Dr Bullmore, who holds appropriate qualifications and specialises in the measurement, prediction and assessment of environmental noise.

34. The planning permission for the JAT is subject to noise conditions relating specifically to Cae Rosser Isaf. These require a fence to provide attenuation and screening, noise monitoring, and specify maximum construction noise levels. Even so, at the permitted levels the occupants of Cae Rosser Isaf would experience significant noise and disturbance from construction traffic. This would be mainly during specified working hours, but not exclusively so as the conditions permit the delivery and receipt of large components outside those hours.
35. The resulting adverse effect on living conditions must, however, be balanced against the benefits of the proposed scheme. It is necessary to bear in mind that noise and disturbance would be experienced for a limited period, and that it is almost inevitable that the JAT will be used for the construction of the Pant y Wal and Fforch Nest Bridgend schemes in any event. The construction of the proposed Fforch Nest (RCT) turbines would significantly increase the number of trips by construction vehicles, and so would add to the noise and disturbance that would be experienced. Depending on the programming of construction works, the appeal scheme would increase the intensity or frequency of disturbance, or its duration, or possibly all three impacts. Nevertheless, the noise and disturbance associated with the construction of the Fforch Nest (RCT) turbines would be much less than that associated with the construction of the Pant y Wal and Fforch Nest Bridgend turbines, and the JAT itself.
36. Although several Inspectors have expressed sympathy with the view that a review of the ETSU-R-97 methodology is overdue, TAN 8 confirms that its recommendations can be regarded as relevant guidance on good practice<sup>14</sup>. Whilst background noise measurements have sometimes been found to be unreliable in the past, it has been demonstrated to my satisfaction that operational noise had been assessed against appropriate measurements of background noise in this instance. 40dB has been chosen as the lower absolute daytime noise limit, when ETSU-R-97 recommends that the choice of level within the range of 35-40dB depends on a number of factors including the number of dwellings in the neighbourhood. However, I accept that the choice should be a balanced judgment based on a number of considerations, including that unnecessarily restrictive requirements might stifle the generation of wind energy. Given that it is unlikely that the densely developed residential areas in the vicinity of the appeal site would be 'low noise environments' for the purposes of this guidance, on balance I consider the choice of 40dB as the lower absolute daytime noise limit to be appropriate, even though the number of dwellings in these areas is large.
37. The cumulative effects of the simultaneous operation of all existing and proposed wind farms in the region have been assessed in an addendum to the ES<sup>15</sup>. The assessment demonstrates that noise limits derived in accordance with ETSU-R-97 would not be exceeded. As shown in the case of the 'Gorsedd Bran' wind farm appeal<sup>16</sup>, there may be circumstances in which turbines could operate at or within the levels suggested by ETSU-R-97 but still give rise to unacceptable effects in combination with other wind turbines. However, in this instance I was not able to personally experience noise from the existing Taff Ely wind farm in any area where people might also experience noise from the proposed Fforch Nest / Pant y Wal turbines. Dr Bullmore gave evidence at the Inquiry which satisfies me that the topography and separation distance would be

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<sup>14</sup> TAN 8, Annex C, paragraph 2.16.

<sup>15</sup> Section 10 of the SEI dated October 2008, Volume 1a.

<sup>16</sup> Appeal Ref APP/R6830/A/08/2074921

such that the combined effects that concerned the Inspector in the Gorsedd Bran appeal would not occur in this instance. In arriving at this view, I have taken into account that noise conditions attached to the planning permission for the Mynydd Portref wind farm have recently been amended. Even though the amended conditions would allow high levels of operational noise to be experienced in some places, as these are specific locations this does not indicate that the Mynydd Portref wind farm will be allowed to be unusually noisy or that it would have an effect in Gilfach Goch that has not been taken into account.

38. There is no clear evidence at this stage of what may cause enhanced amplitude modulation (EAM) (sometimes referred to simply as AM). However, on the evidence before me occurrences appear to be rare and intermittent. There is no indication that any conditions may be present at the appeal site under which EAM may occur, or that the level of any EAM that might arise would cause an unacceptable degree of noise or disturbance. Inspectors have concluded in many appeal decisions that it would be unnecessary and inappropriate to impose conditions relating to EAM, and that is my view in this case.
39. TAN 8 confirms that there is no evidence that ground transmitted low frequency noise from wind turbines is at a sufficient level to be harmful to human health, and I have no firm evidence to the contrary.
40. The noise conditions that have been put forward in this instance take cumulative noise effects into account. They have been agreed with the Council, and satisfy all the tests set out Welsh Office Circular 35/95: *The Use of Conditions in Planning Permissions*. Subject to these conditions, and taking into account all other noise-related matters raised by Mr Jenkins and others, I consider for the above reasons that operational noise from the proposed development would not have unacceptable effects.

### Safety

41. As confirmed in TAN 8, properly designed, erected and maintained wind turbines are safe<sup>17</sup>. I am not aware of any example of injury to a member of the public, and the distance between the proposed turbines and any occupied buildings would be greater than necessary to meet safety requirements.

### Traffic Generation

42. The Council is content that the difficulties associated with wind farm construction traffic can be reduced to an acceptable level by the use of conditions relating to a traffic management plan. That is also my view, though as the proposed Fforch Nest RCT scheme could generate traffic at the same time as other wind farm schemes in the area it is necessary that the traffic management plan for this proposal should bear in mind the plans for others.

### Wildlife

43. Concerns raised at the Inquiry related mainly to birds such as buzzards and red kites. The effects on ecology and nature conservation have, however, been extensively assessed in the ES and the effect on habitats have been reviewed in SEI published in May 2011. The ES takes breeding and wintering bird communities into account. Significantly, no objections have been raised by the Countryside Council for Wales

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<sup>17</sup> TAN 8, paragraph 2.19

(CCW) or the RSPB. I am satisfied on the evidence before me that there would be no unacceptable effects on ecology, nature conservation or habitats.

#### Rainwater run-off and ground stability

44. The effects of the proposed development on geology, hydrology and hydrogeology have also been assessed in the ES. A number of possible effects on the water environment have been considered. It is recognised that careful management is necessary to avoid effects such as potential sediment-laden run-off that could damage watercourses. However, site mitigation and monitoring measures are fully described and can be ensured by conditions relating to a requirement for a construction method statement. I am satisfied on this basis that any adverse effects on the water environment would be minor and quickly controlled if they were to occur. There is no firm evidence that the construction or operation of the proposed development would have any significant effect on ground stability.

#### **Summary and Overall Conclusions**

45. I have concluded above that the proposed development would have a negative effect on the wildness of the site and its natural beauty. There would be consequent adverse effects on the recreational enjoyment of the site and walks through the countryside. There would also be consequent adverse impacts on landscape character and views from built-up areas, and an impact on the landscape character of the Rhondda LSHI. Construction noise would have adverse effects on living conditions at a dwelling close to the JAT. The proposed development would be harmful in these respects.

46. However, the accessibility of the site would not be compromised, and other nearby upland areas away from wind farms would remain accessible. The proposed Fforch Nest (RCT) turbines would not be so dominant that they would have an unpleasantly overwhelming and unavoidable presence when seen from residential areas, either on their own, or in combination with the consented Fforch Nest (Bridgend) and Pant y Wal turbines. The direct physical impact on the registered Rhondda LSHI would be very slight, and the reduction in the value of the special historic landscape as a whole would be of slight significance. The adverse effect on living conditions at Cae Rosser Isaf would be limited to the construction period and by conditions. These are considerations that reduce the weight I give to the harm that I have identified.

47. I do not consider that the appeal proposal would create an unacceptable sense of encirclement and being surrounded by wind turbines. Nor do I consider that it would look out of place in, or would have significantly harmful visual effects on the wider landscape. Operational noise would be controlled by conditions and would not have unacceptable effects. No unacceptable effects on safety, traffic generation, wildlife, rainwater run-off, ground stability or other matters have been identified. The proposed development would be broadly neutral in these respects.

48. On the other hand, the proposed scheme would generate a significant amount of 'green' energy. This is a substantial benefit in the public interest. Although wind turbines do not generate power in still conditions and so require back-up generation capacity, they help to reduce carbon emissions, combat climate change, and reduce dependency on finite resources of fossil fuels. The generation of energy from on-shore wind turbines is therefore a key component of Welsh Government energy policy.

49. The proposed scheme would make a significant contribution towards the Welsh Government's aspirations for wind energy in Wales, and particularly towards the

identified maximum capacity of 430MW for SSA F. The actual installed capacity for proposed schemes in SSA Area F will vary, depending on turbine selection. However, the installed capacity of the appeal scheme and all other schemes that are completed or well advanced will fall far short of SSA F's envisaged maximum capacity. The application for consent for the very large Pen y Cymoedd wind farm has not yet been determined, and other schemes for which planning applications have been made are at an early stage. However, even if they do go ahead it is unlikely that the identified maximum capacity for SSA F would be exceeded.

50. Within (and immediately adjacent) to the SSAs there is an implicit objective in national planning policy to accept landscape change, i.e. a significant change in landscape character from wind turbine development<sup>18</sup>. Some harm to the wildness and natural beauty of upland areas is an inevitable consequence. That does not mean that all areas within the SSAs will be suitable for large scale wind turbines. However, the appeal site is within an SSA and is a predominantly flat, extensive area of upland, located at least 500m away from the nearest residential property. It therefore accords with site location criteria set out in LDP Policy AW13. The refinement study found that it is an appropriate location for large-scale wind turbines, and I have no reason to disagree.
51. I have concluded that the proposed development would not have an unacceptable effect on the visual quality of the wider landscape. It would not reduce accessibility to the countryside, nor would it cause unacceptable impact on sites designated for their nature conservation value. It is not disputed that the natural beauty and special qualities of the Brecon Beacons National Park would be protected. There would be no significant adverse effects on living conditions within homes. Nor would there be an unacceptable effect on residential amenity in streets or gardens. A range of adverse impacts on the environment would therefore be avoided. Unavoidable impacts, such as effects on the natural beauty of the landscape and the enjoyment of the countryside, would be minimised by taking advantage of local landform and locating the proposed turbines well away from the plateau edge. Other impacts, including those of construction noise, traffic generation and possible effects on the water environment would be minimised by the use of conditions. The proposal would thus accord with the thrust of LDP Policy AW13 and national planning policy relating to wind energy in Section 12 of PPW and TAN 8. As there would be no unacceptable harm to health or local amenity there would be no conflict with LDP Policy AW10.
52. With regard to the Rhondda LSHI, LDP Policy AW7 permits development proposals which impact on upon sites of historical merit where it can be demonstrated that they would preserve or enhance the character and appearance of the site. This policy accords with the Welsh Government's objective of preserving or enhancing the historic environment, set out in paragraph 6.1 of PPW. Supplementary Design Guidance to the LDP (SPG), entitled *The Historic Built Environment*<sup>19</sup>, advises that the purpose of the Register is to encourage their better understanding of Historic Landscapes, so that they can be managed in a way that retains the key historic features and character while allowing appropriate change in response to modern day needs<sup>20</sup>. The guidance set out *Conservation Principles* also makes it clear that changes to historic assets are

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<sup>18</sup> TAN 8, Annex D, paragraph 8.4.

<sup>19</sup> March 2011

<sup>20</sup> Paragraph 3.6.2

inevitable, but need to be managed to ensure that significance is not diminished as a consequence<sup>21</sup>.

53. The proposed development would preserve the key features of the historic landscape that make it significant. Some change to the landscape character of the Rhondda LSHI is inevitable if the appeal site is to contribute to the generation of wind energy, but in my view the generation of such energy is an overriding public policy objective that justifies the need for change. There is no reasonably practical alternative to large scale wind turbines if the site's potential for the generation of energy is to be realised, including hydro power. For the reasons I have given the harm would be reduced to the minimum consistent with achieving that objective. The Rhondda LSHI is of national significance, but the benefits of the proposal in terms of energy generation would be substantial, for the local community as well as society as a whole. In my view the benefits would decisively outweigh the very slight direct physical impact, and the slightly significant reduction in the value of the special historic landscape. On balance, I therefore conclude that the proposed development would not conflict with local and national policies to protect the historic environment. As there would be no unacceptable effect on cultural heritage, and all other criteria would be satisfied, the proposed development would also be consistent with all the requirements of LDP Policy AW12. I conclude for these reasons that the impact on the Rhondda LSHI would be acceptable.
54. In practice there is no scope for other forms of turbine that would be more appropriate to the context of the appeal site, or therefore to reinforce local distinctiveness through design choices. Consequently, wind farm development does not sit easily with LDP Policy AW6, which is a general design policy. However, in my view policies AW12 and AW13, which are specific to development of this type, should carry greater weight in these circumstances. On balance, I am satisfied that the proposed development would accord with the development plan as a whole, and with national planning policy.
55. I have explained that the circumstances in the Hirwaun and Gorsedd Bran appeals were significantly different to those that apply in this instance. I have also had regard to the many other wind farm appeal decisions to which I have been referred. The circumstances were different in each case. I find nothing in these decisions, the results of a survey of local opinion, or any other material consideration that has been raised, to turn me from the conclusion that the benefits of the proposed development would outweigh the harm that I have identified, or to indicate that the appeal should be determined other than in accordance with the development plan.
56. Draft conditions were discussed at the Inquiry. It was agreed that some should be revised, and others omitted. The conditions I have imposed are in accordance with the subsequently revised draft, though with some minor typographical modifications. They are necessary in the interests of proper planning and for reasons given above. I consider that they meet all the tests for conditions set out in Welsh Office Circular 35/95: *The Use of Conditions in Planning Permissions*.
57. I conclude that the appeal should be allowed and planning permission should be granted, subject to the conditions included at Appendix A.

*A D Poulter*

**INSPECTOR**

<sup>21</sup> Un-numbered paragraph, Page 18, under section headed *Managing change to an historic asset*.

## APPEARANCES

### FOR THE LOCAL PLANNING AUTHORITY:

Morag Ellis QC Appointed by the Director of Legal Services,  
Rhonda Cynon Taf County Borough Council

She called

Mr J Campion BA(Hons) BLD Director, John Campion Associates Limited  
MSc CMLI MIEEM

Mr C H Jones Dip TP MRTPI Development Control Manager, Rhondda  
Cynon Taf County Borough Council

### FOR THE APPELLANT:

Mr Paul Maile Associate, Eversheds LLP

He called

Ms Sam Oxley BSc(Hons) Associate, Land Use Consultants  
MLD CMLI

Mr D I Stewart MA (Cantab) David Stewart Associates  
DipTP MRTPI

Dr Andrew Bullmore BSc Managing Director, Hoare Lea Acoustics  
PHD

### FOR THE GREEN VALLEY ACTION GROUP:

Mr Geoffrey Sinclair (Advocate and Environmental Information Services,  
main planning witness)

He called

Mrs L Cole Local Resident

Mr J Frost "

Mr D Edwards "

Ms J Noble "

### INTERESTED PERSONS:

Suzy Davies AM Assembly Member, South Wales West Region

Councillor Bill Lewis Member, Ogmere Valley Community Council

Mr J Jenkins Local Resident

Mr F Jenkins "

Mr Wyndham Jones "

Mr G Francis	“
Ms K Leek	“
Ms J Peters	“
Mr P Worgan	“
Mr G Jury	“
Mr R Bromwell	“
Mr E Wilkinson	“
Mr L Evans	“
Mrs M Griffiths	“
Mrs S Harris	“
Mr S Patterson	“
Mr G Williams	“

## DOCUMENTS SUBMITTED AT THE INQUIRY

- Doc 1 Statement of Common Ground
- Doc 2 Completed Planning Obligation (S106), with earlier drafts (Docs 2A – 2C)
- Doc 3 Minutes of Taff Ely Development Control Committee 14 April 2011, confirming recommendation of approval for a variation of noise conditions, Mynydd Portref wind farm.
- Doc 4 Mynydd Portref – Site Location Plan
- Doc 5 Hirwaun wind farm Appeal Scheme – OS Map showing site boundaries
- App 1 Report: RCT Onshore Windfarms: Development Control Support July 2007. Ove Arup & Partners Ltd
- App 2 Letter from Glamorgan Gwent Archaeological Trust to the Planning Inspectorate, Dated 23 June 2011, clarifying archaeological recommendations made
- App 3 Appeal Decisions: Appeal refs APP/J0540/A/08/2083801 and 2090541 (Peterborough)
- App 4 Appeal Decision: Appeal Ref APP/D2510/A/04/115519 (Skegness)
- App 5 Rhondda Cynon Taff County Borough Council: Report of Director of Regeneration and Planning to the Development Control Committee, dated 4 October 2011, relating to Application No 09/1311/04 (84 turbines, known as Pen y Cymoedd)
- App 6 Rhondda Cynon Taff County Borough Council: Report of Service Director, Development Control, to the Development Control Committee, dated 1 April 2008, relating to Application No 06/1415 (12 turbines at Hirwaun Common)
- LPA 1 Map showing overlay of Rhondda LSHI and SSA F boundaries
- LPA 2 Letter from RWE NPower Renewables, to DC Manager, RCT, dated 15 November 2010.
- LPA 3 Extracts from the Inspector's Report on the Rhondda Cynon Taf LDP, relating to TAN 8 / SSA F study
- GVAG 1 Table indicating number of properties / magnitude of visual impacts, relating to SEI: Assessment of Views From Residential Properties
- GVAG 1A Letter from Walters UK, dated 21 October 2011, confirming commencement of work on JAT.
- GVAG 2 IPC list of projects, annotated with notes re generating capacity
- GVAG 3 Updated list of wind farm projects, with generating capacities
- GVAG 4 Information relating to applications Refs 06/0790/10: 14 No wind turbines (Trane Renewable Energy Park – withdrawn) & 07/0106/10: Anemometry mast (Mynydd Pen-y-Graig – withdrawn)

- LR 1 Independent Evidence of J Jenkins on noise, with summary and appendices.
- LR 2 Submissions of Dr Andrew Bullmore in response to the submission of J Jenkins on noise
- LR 3 Salmon and Trout Association: The Effects of Excess Fine Sediment in Rivers: supporting evidence to Mr Worgan's statement
- LR 4 Photographs of Miner's memorial, Clydach Vale, Clydach Vale 2011, and of the upper Ogwr Fach valley 2011.
- LR 5 Statement to the Inquiry from the Open Spaces Society, dated 18 October 2011
- LR 6 Summary of comments from surveys, and survey data

## **Appendix A**

### **Schedule of Conditions**

1. The development hereby permitted shall be begun before the expiration of 5 years from the date of this permission.
2. a) The permission hereby granted shall endure for a period of 25 years from the date when electricity is first exported from any wind turbine within the development hereby permitted to the electricity grid network ('First Export Date'). Written confirmation of the First Export date shall be notified in writing by the developer to the Local Planning Authority within one month of the First Export Date.  
b) Not later than 12 months before the expiry date of the permission, a decommissioning and site restoration scheme shall be submitted for the written approval of the Local Planning Authority. Such a scheme shall include for
  - the removal of all surface elements, plus one metre of the turbine bases below ground level, of the wind farm;
  - confirmation of the management and timing of works;
  - a traffic management plan to fully address highway issues during the period of the decommissioning works;
  - any other works of restoration and aftercare

The approved decommissioning scheme shall be implemented and completed within 24 months of the expiry date of this permission.

3. All of the turbines' blades shall rotate in the same direction.
4. No development shall take place until details of the following have been submitted to, and approved in writing by the Local Planning Authority:
  - The make, model, external finish and colour of the proposed turbines;
  - The materials to be used in the construction of any external unit transformer housing

Development shall be carried out in accordance with the approved details.

5. All wind turbines shall be of a 3 bladed configuration and not exceed an overall height of 115m to the tips of the turbine blades. The turbines shall not display any prominent name, logo, symbol, sign, or advertisement on any external surface. The turbines shall not be illuminated and there shall be no permanent illumination on the site.
6. All electricity and control cables within the site shall be laid underground and alongside tracks which are constructed on the site as part of the development.
7. Prior to the commencement of development a Construction Method Statement (CMS), describing the works to be undertaken and pollution prevention measures to be implemented during the construction phase, shall be submitted in writing to be approved in writing by the Local Planning Authority. Development shall be implemented in accordance with the approved Statement. The Statement shall include provisions relating to:
  - The construction period and sequence of development works
  - Pollution control (including fuel, oil, concrete and chemical storage)
  - Construction Noise Management Plan
  - Environmental Management (to include measures to protect bio-diversity within the site)

- Details of location of temporary storage compounds
  - Details of track construction and laying of cables and measures to be implemented to ensure that there are no polluting discharges from tracks and disturbed areas
  - Provision of any temporary fencing
  - Details of excavation of turbine bases and of the nature, type and quantity of material required to be imported onto the site for backfilling operations
  - The management of ground and surface water
  - The management of foul water
  - Details of any soil storage and spreading
  - The provision of any means of temporary site illumination
- 8.** Construction work on the site shall be confined to the hours of 0700 - 1900hrs on Monday to Friday inclusive, 0700 - 1300 hours on Saturday with no working on a Sunday or national public holiday.
- 9.** No development shall take place until temporary fencing has been erected, in accordance with details which have been submitted to and approved in writing by the Local Planning Authority around the archaeological features that have been identified within the site (as shown on Figure 11.1 (Drawing Number REN/DEV/0772/A) within the Environmental Statement (2006)). No works shall take place within any fenced-off area. All fencing shall be removed within 3 months following the completion of the construction works.
- 10.** No development shall take place until a written scheme of archaeological work has been submitted by the applicant and approved in writing by the Local Planning Authority. The scheme shall be implemented as approved.
- 11.** No development shall take place until a scheme for the protection of Rights of Way during construction has been submitted to and approved in writing by the Local Planning Authority. The scheme shall include:
- Provision to ensure that Public Rights of Way are maintained with no obstruction to use;
  - Measures to prevent any damage to Rights of Way from constructional activity at the site.

The agreed scheme shall thereafter be implemented.

- 12.** Prior to the commencement of any development on the site full engineered design details of the proposed New Water Crossing (NWC) over the Cwm Ogwr Fach (as referred to on Figure 1.7 of the SEI October 2008) shall be submitted to and approved in writing by the Local Planning Authority. The NWC shall be constructed in accordance with the agreed details.
- 13.** No development shall take place until a Construction Traffic Management Plan (CTMP) has been submitted to and agreed in writing by the Local Planning Authority. The CTMP shall include provisions as follows:
- There shall be no access to the site other than via the Joint Access Track approved by Bridgend County Borough Council
  - The routing of deliveries
  - The scheduling and timing of movements and deliveries
  - Details of escorts for abnormal loads
  - Temporary warning signs and banksman/escort details.

- Details of any remediation works, alterations to road layouts, movement of signs and any other changes required to the highway network

The CTMP shall have regard to traffic generated, or likely to be generated, in association with the construction of other wind farms in the vicinity.

The approved CTMP shall be implemented in the agreed form.

- 14.** The rating level of noise emissions from the wind turbines hereby permitted and in combination with any wind turbines that may be constructed pursuant to the planning permission granted by Bridgend County Borough Council under reference P/06/1080/FUL (including the application of any tonal penalty), when calculated in accordance with the attached Guidance Notes, shall not exceed the values set out in the attached Tables. Each of these values shall apply to all of the properties falling within the respective areas shown on the attached plan unless otherwise agreed with the local planning authority. Noise limits for any property which lawfully exists at the date of this consent but which is not covered by any of the areas shown on the plan attached shall be those of the nearest area shown on the plan.
- 15.** At the request of the Local Planning Authority, following a complaint to it about noise emissions from the wind farm, the operator of the wind farm shall, at its expense, employ a consultant approved by the Local Planning Authority, to measure, assess and report to the Local Planning Authority the level of noise emissions from the wind farm at the property to which the complaint relates ('the complainant's property') following the procedures described in the attached guidance notes.
- 16.** Wind speed, wind direction and power generation data for each wind turbine shall be continuously logged and provided to the Local Planning Authority at its request and in accordance with the attached guidance notes within 28 days of any such request.
- 17.** Notwithstanding the provisions of conditions 14–16, the wind farm operator shall undertake measurements of noise levels using an appropriately qualified noise consultant during the first year of the operation of the wind turbines in a scheme to be agreed with the Local Planning Authority to demonstrate compliance with the noise levels set out in the attached tables. The data produced in accordance with the scheme shall be forwarded to the Local Planning Authority within 28 days of the measurements being undertaken.
- 18.** Prior to the commencement of development, a report indicating a methodology for undertaking a Conditions Survey of Local Roads (CSLR) that could be affected by the proposed development shall be submitted to and approved in writing by the Local Planning Authority. The CSLR shall include:
  - The timescales for undertaking the survey's and the method(s) of reporting the findings to the Local Planning Authority; and
  - Comprehensive photographs.

The development shall not be brought into use until the final survey (on completion of the development hereby approved) have been submitted to and approved in writing by the Local Planning Authority.

- 19.** In the event that a turbine does not function (i.e. does not supply electricity to the grid) for a continuous period of 12 months and, if so instructed by the Local Planning Authority, the wind turbine and its associated ancillary equipment shall be dismantled,

and its base removed to a depth of one metre below ground level, and removed from the site within a period of 6 months from the end of that 12 month period.

- 20.** A micro-siting distance of 30m radius around the turbine locations (turbine nos. 3, 7, 8, 9, 10, 11 and 13 as detailed in Table 5.2, p.28 of the SEI (Volume 1a) October 2008) is permitted providing that such amendments to the location of any turbine and consequential amendments to the line of the access tracks shall be submitted to the Local Planning Authority for approval in writing prior to the construction of the specific turbine.
- 21.** Notwithstanding the micro-siting tolerance permitted by virtue of condition 20 of this permission, no turbine shall be located within 50m of the Cwm Ogwr Fach or the conifer plantation edge of Cwm Clydach Forest. For the avoidance of doubt as to what line represents the edge of the conifer plantation the applicant will prior to any works in the construction of turbines 8 and 11 (as numbered on the Figure 1.7 Amended Site Layout Plan contained within the 2008 SEI, or subsequently renumbered) submit for the written agreement of the Local Planning Authority a plan on which the exact location of these two turbines in relation to a defined conifer plantation edge is confirmed.
- 22.** Any facilities for the on-site storage of oils, fuels or chemicals shall be situated on impervious bases and surrounded by impervious bund walls. The volume of the bunded compound should be at least equivalent to the capacity of the tank plus 10%. If there is a multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses must be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipework shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund.

#### **SCHEDULE OF GUIDANCE NOTES RELATING TO THE NOISE CONDITIONS**

These notes are to be read with and form part of the noise conditions. They further explain the conditions and specify the methods to be deployed in the assessment of complaints about noise emissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level as determined from the best fit curve described in Note 2 of these Guidance Notes and any tonal penalty applied in accordance with Note 3.

#### **NOTE 1**

- (a) Values of the  $L_{A90,10min}$  noise statistic shall be measured at the approved measurement location using a sound level meter of BS EN 60651/BS EN 60804 Type 1, or BS EN 61672 Class 1 standard (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using a fast time weighted response as specified in BS EN 60651/BS EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). The sound level meter shall be calibrated in accordance with the procedure specified in BS 4142:1997 (or the replacement thereof). These measurements shall be undertaken in such a manner as to enable a tonal penalty to be applied in accordance with Guidance Note 3.
- (c) The microphone shall be mounted at 1.2 - 1.5 metres above ground level, fitted with a two layer windshield or suitable equivalent system. The two layer windshield or suitable equivalent system shall be approved in writing by the Local Planning Authority prior to the

commencement of measurements. The microphone shall be fitted with the approved windshield and shall be placed outside the complainant's dwelling and be not more than 35 metres from it. The microphone shall be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground. In the event that the consent of the complainant for access to his or her property to undertake compliance measurements is withheld, the wind farm operator shall submit for the written approval of the Local Planning Authority details of the proposed alternative representative measurement location prior to the commencement of measurements and the measurements shall be undertaken at the approved alternative representative measurement location.

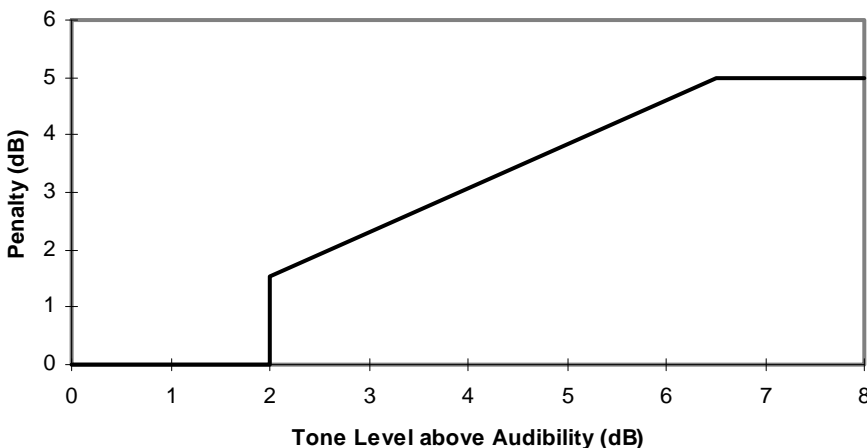
- (d) The  $L_{A90,10min}$  measurements shall be synchronised with measurements of the 10-minute wind speed, wind direction, rainfall and power generation data from the turbine control systems of the wind farm.
- (e) To enable compliance with the noise condition to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed in metres per second ( $ms^{-1}$ ), arithmetic mean wind direction in degrees from north and rainfall data in each successive 10-minute periods by direct measurement of 10 metre height wind speeds and direct measurement of hub height wind direction and direct measurement of rainfall at the permanent meteorological monitoring mast erected in accordance with the planning permission on the wind farm site. The wind farm operator shall continuously log arithmetic mean nacelle anemometer wind speed, arithmetic mean nacelle orientation, arithmetic mean wind direction as measured at the nacelle and arithmetic mean power generated during each successive 10-minute periods for each wind turbine on the wind farm. The rainfall detection system to be installed at the permanent meteorological mast erected in accordance with the planning permission on the wind farm site shall be approved by the Local Planning Authority prior to the first export of electricity from the development to the local electricity distribution network. All 10-minute periods shall commence on the hour and in 10 minute increments thereafter synchronised with Greenwich Mean Time.
- (f) Data provided to the Local Planning Authority in accordance with conditions 15 - 17 shall be provided in comma separated values in electronic format.

## Note 2

- (a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Note 2 paragraph (b).
- (b) Valid data points are those measured during the conditions specified by the Local Planning Authority in its written request but excluding any periods of rainfall measured at the permanent meteorological mast erected in accordance with the planning permission on the wind farm site. These specified conditions shall include the range of wind speeds, wind directions, times of day, meteorological conditions and power generation requested by the Local Planning Authority. In specifying such conditions the Local Planning Authority shall have regard to those conditions which prevailed during times when the complainant alleges there was disturbance due to noise or which are considered likely to result in a breach of the limits.
- (c) Values of the  $L_{A90,10min}$  noise measurements and corresponding values of the 10-minute ten metre height wind speed for those data points considered valid in accordance with Note 2 paragraph (b) shall be plotted on an XY chart with noise level on the Y-axis and wind speed on the X-axis. A least squares "best fit" polynomial curve of an order deemed appropriate by the independent consultant shall be fitted to the data points and used to define the wind farm noise level at each integer wind speed.

**NOTE 3**

- (a) Where, in the opinion of the Local Planning Authority as advised to the wind farm operator in its written request under condition 15, wind farm noise emissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component a tonal penalty shall be calculated and applied using the following rating procedure.
- (b) For each 10-minute interval for which  $L_{A90,10min}$  data have been determined to be valid in accordance with Note 2 a tonal assessment shall be performed on noise emissions during 2-minutes of each 10-minute period. The 2-minute periods shall be regularly spaced at 10-minute intervals provided that uninterrupted uncorrupted data are available (“the standard procedure”). Where uncorrupted data are not available, the first available uninterrupted clean 2-minute period out of the affected overall 10-minute period shall be selected. Any such deviations from the standard procedure shall be reported.
- (c) For each of the 2-minute samples the tone level above audibility ( $L_{ta}$ ) shall be calculated in accordance with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-1997.
- (d) The tone level above audibility ( $L_{ta}$ ) shall be plotted against 10 metre height wind speed for each of the 2-minute samples. For samples for which the tone level was below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted.
- (e) A least squares “best fit” linear regression shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the “best fit” line fitted to values within  $\pm 0.5m/s$  of each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Note 2.
- (f) The tonal penalty shall be derived from the average tone level above audibility of the tone according to the figure below.



**NOTE 4**

- (a) If a tonal penalty is to be applied in accordance with Note 3 the rating level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Note 2 and the penalty for tonal noise as derived in accordance with Note 3 above at each integer wind speed within the range requested by the Local Planning Authority in its written request in accordance with paragraph (B) of the condition.
- (b) If no tonal penalty is to be applied then the rating level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Note 2.
- (c) In the event that the rating level of noise at the dwelling to which a complaint relates is higher at any wind speed than the limit(s) set out in the tables attached to the conditions or the noise limits for a complainant's dwelling in accordance with paragraph (C) of the noise condition, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rated level relates to wind turbine noise emission only.
- (d) The wind farm operator shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:
  - (i) Repeating the steps in Note 2, with the wind farm switched off, and determining the background noise ( $L_3$ ) at each integer wind speed within the range requested by the Local Planning Authority in its written request.
  - (ii) The wind farm noise ( $L_1$ ) at this speed shall then be calculated as follows where  $L_2$  is the measured level with turbines running but without the addition of any tonal penalty:

$$L_1 = 10 \log \left[ 10^{L_2/10} - 10^{L_3/10} \right]$$

- (iii) The rating level shall be re-calculated by adding the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise  $L_1$  at that integer wind speed.

**TABLE OF NOISE LIMITS RELATING TO CONDITION 14.**

**Between 23:00 and 07:00 hours (Noise Level in dB L<sub>A90, 10min</sub>):**

Area as indicated on Plan 1	Wind speed at 10m height, m/s											
	1	2	3	4	5	6	7	8	9	10	11	12
Price Town	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.7	41.7	42.8	43.9	45.2
Ogmore Vale	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	41.3	42.9
Evanstown	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Tonypandy	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Clydach Vale	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Pantycornant	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.6	43.9
Gilfach Goch	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Pen Llwyn Gwent	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0

**At all other times (Noise Level in dB L<sub>A90, 10min</sub>):**

Area as indicated on Plan 1	Wind speed at 10m height, m/s											
	1	2	3	4	5	6	7	8	9	10	11	12
Price Town	38.6	39.4	40.0	40.5	40.9	41.3	41.6	42.1	42.6	43.2	44.1	45.2
Ogmore Vale	37.0	37.0	37.0	37.5	38.0	38.6	39.3	40.0	40.9	41.9	43.1	44.1
Evanstown	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Tonypandy	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Clydach Vale	37.0	37.0	37.0	37.0	37.0	37.6	38.7	39.7	40.8	41.8	42.8	43.6
Pantycornant	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.8	39.0	40.1	41.1
Gilfach Goch	37.0	38.6	38.8	39.0	39.3	39.7	40.2	40.8	41.1	41.0	41.0	41.3
Pen Llwyn Gwent	37.0	37.0	37.0	37.0	37.0	37.0	37.7	38.5	39.6	40.7	41.5	42.1

(Conditions End)