



## Adroddiad

Ymchwiliad a gynhaliwyd ar 18/05/04

Ymweliad â safle a wnaed ar 18/05/04

## Report

Inquiry opened on 18/05/04

Site visit made on 01/06/04

gan/by John Davies BSc MRTPI

Arolygydd penodwyd gan Cynulliad  
Cenedlaethol Cymru

an Inspector appointed by the National  
Assembly for Wales

Dyddiad/Date 26-07-2004

TOWN AND COUNTRY PLANNING ACT 1990

POWYS COUNTY COUNCIL

APPEAL BY WINDJEN POWER LTD

PROPOSED CONSTRUCTION AND OPERATION OF 6 WIND TURBINE GENERATORS  
AND ASSOCIATED ACCESS TRACKS; CONSTRUCTION OF 1 CONTROL BUILDING;  
MONITORING MAST; TEMPORARY STORAGE COMPOUND AND BORROW PITS

AT

LLETHERCYNON FARM, GARTHBRENGY, BRECON, POWYS LD3 9TZ

**File Ref: APP/T6850/A/03/1122720**

**Site address: Llethercynon Farm, Garthbrenny, Brecon, Powys LD3 9TZ**

- 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 Windjen Power Ltd against the decision of Powys County Council.
- The application (Ref. B/00/0111), dated 13 April 2000, was refused by notice dated 22 January 2003.
- The development proposed is the construction and operation of 6 wind turbine generators and associated access tracks; construction of 1 control building; monitoring mast; temporary storage compound and borrow pits.

**Summary of Recommendation: The appeal be dismissed.**

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**ABBREVIATIONS**

AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
BAWT	Brecon Against Wind Turbines
BHS	British Horse Society
BS	British Standard
BWEA	British Wind Energy Association
CCW	Countryside Council for Wales
CO <sub>2</sub>	Carbon Dioxide
CROW	Countryside and Rights of Way Act 2000
EM	Explanatory Memorandum (Structure Plan)
ES	Environmental Statement
ETSU	Energy Technology Support Unit
gm	grammes
Hz	Unit for measuring frequency = number of cycles per second
HLSHI	Historic Landscape of Special Historic Interest
LCA	Landscape Character Area
MW	Megawatts
PIM	Pre-inquiry meeting
PPG	Planning Policy Guidance Note
PPS	Planning Policy Statement
PPW	Planning Policy Wales, March 2002
SAM	Scheduled Ancient Monument
SCG	Statement of Common Ground
SLA	Special Landscape Areas
SPG	Supplementary Planning Guidance
TAN	Technical Advice Note (Wales)
TWh	Terrawatt hours (1 TWh = 1 billion kWh, or kilo watt hours)
UDP	Unitary Development Plan
VSA	Visual and Sensory Aspect Area
WTB	Wales Tourist Board
WTG	Wind Turbine Generator
ZVI	Zone of Visual Influence

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## 1. Procedural Matters

- 1.1 By letter dated 31 July 2003 the National Assembly directed that it should determine this appeal because another Assembly Department, namely Cadw, had raised major objections.
- 1.2 A Pre-inquiry meeting (PIM) was held on 4 December 2003 [CD22]. The inquiry sat for 9 days, from 18-21 and 25-28 May inclusive and on 1 June 2004. I made an accompanied site visit after the inquiry closed on 1 June followed by a number of unaccompanied site visits agreed with the parties the same day. During the course of the inquiry, outside the sitting times, I made a number of unaccompanied visits and viewed the site from most of the locations referred to in the evidence.
- 1.3 On 9 March 2004 I attended a trial run, which involved an articulated vehicle, the same length as would be used to transport the turbine components to the site, being driven along the proposed access route (see paragraph 5.1-5.2 below).
- 1.4 On Monday 24 May at the request of the parties I made unaccompanied visits to the Parc Cynog and Blaen Bowi wind farms. Details are given in paragraphs 4.1-4.2 below.
- 1.5 An Environmental Statement (ES) in accordance with the Town and Country Planning (Environmental Impact Assessment)(England and Wales) Regulations 1999 [CD1.1] was submitted as part of the planning application. This was in 3 volumes comprising a Non-Technical Summary [CD10.1.1], a Written Statement describing the environmental effects of the project and the mitigation measures [CD10.1.2], and a volume of maps, plans and figures [CD10.1.3]. Mitigation measures are set out in Section 13 of the Written Statement. The responses of the consultees are contained in Appendix H of the Written Statement. A full set of the responses to the statutory and non-statutory consultations carried out by the Council on the planning application were appended to the committee report dated 28 November 2002 [CD11]. In a letter dated 3 September 2003 the Welsh Assembly Government requested further information under Regulation 19 of the 1999 Regulations for the purposes of the inquiry. The further information was:
  - There should be a visualisation showing the impact of the turbines from and towards Twyn-y-Gaer hillfort.
  - Although Twyn-y-Gaer lies outside the boundary of the development itself, it should be shown on Figure 14. To exclude this nationally important monument while including PRN2392 (also outside the site) is potentially misleading.

The arrangements for the submission of this information for the inquiry were agreed at the PIM [CD22 – para 31]. The further information is in documents APP.KH/2 (paragraphs 205-231, 243-245, 281-287), APP.KH/3 (Fig 7), and APP.KH/5 (Appendix 12, Figs 1-6).

- 1.6 This report contains a description of the site and the appeal proposals, the relevant planning policies, the gist of the parties' cases, my conclusions and recommendation. A list of conditions is annexed to the report. Appendix 1 contains the names of those who appeared at the inquiry. Appendix 2 is a list of the documents.

## 2. The Proposal

- 2.1 The proposal is described in the ES [CD10.1], the application and accompanying statement [CD10.0.1 & 2] and the Statement of Common Ground [CD44]. The wind farm would consist of 6 turbines in two groups of 3, one in the northern part of the site south of Llaneglwys Wood and the other near the southern end of the site by the reservoir, on the opposite side of the road from the hill fort SAM. All of the turbines bar one in the northern

cluster would be east of the C60. A 40 metre high monitoring mast would be part of the southern group [CD10.1.2 – App A]. The original layout in the ES [CD10.1.3 – Fig 2] was amended by a revised drawing submitted to the Council on 13 June 2001 titled ‘Figure 2 – Site Layout Amended’ [CD10.5]. This showed a relocation of Turbines 4 and 5 to avoid interference with the operation of the Police radio communications network using the Ysgwydd Hwch mast [CD10.6.14]. The northern cluster would be on land at between 345-375 metres AOD<sup>1</sup> and the southern cluster on land between 345-365 metres AOD. The monitoring mast would be at 375 metres AOD.

- 2.2 The application is for 6 turbines with a hub height of 46 metres, a blade length of 29 metres and a maximum blade tip height of 76 metres. Each turbine would be rated at 1.3MW, giving a total capacity of 7.8MW. The type of machine was not specified as part of the application but in a letter dated 12 February 2001 the applicant stated that Nordex turbines would be used. The blades of these machines are supplied with the blade tip detached, reducing the length to 25.2m for transportation [CD10.0.5; LPA.AB/5]. A plan attached to the letter of 12 February 2001 showed land in the same ownership as the appeal site.
- 2.3 Access tracks would be created off the C60 to service each of the turbines [CD10.1.3 – Fig 6a]. Each cluster of turbines would have its own borrow pit for construction material [CD10.5]. The surplus material from the construction of the bases and access tracks would be backfilled into the borrow pits as shown in the additional drawings LC/TD/BORROWPIT 1/A and 2/A submitted to the Council on 21 August 2000 [CD10.3 & 4]. Underground cables would connect the turbines to the control building. Construction would take 16 weeks [CD10.1.2 – Table 3.2, page 10].
- 2.4 An indicative route for the connection to the national grid is shown on the additional drawing submitted to the Council on 18 August 2000 [CD10.2]; that connection does not form part of the application. The Planning Appraisal explains that this is because this connection is the responsibility of the regional electricity company, SWALEC in this case [CD10.0.3 – 5.3]. The ES states that the connection would be by a combination of underground and overhead lines [CD10.1.2 – 3.1.9], although the Planning Appraisal states this has not been finalised. However, at the inquiry it was stated on behalf of the appellant that the intention was that the connection would be underground (see paragraph 9.57).

### 3. The Appeal Site and Surroundings

- 3.1 The appeal site is shown on Fig 1 of Volume 3 of the ES [CD10.1.3] and is described in the Statement of Common Ground (SCG) [CD44]. It is an elongated area some 3km long oriented in a north-south direction lying about 5km north of the town of Brecon. The hamlet of Garthbreny lies some 2km to the south west. The site is approximately 109ha in extent. The main approach is along the C0223 from Brecon through the village of Llanddew, which is about 4km south of the site. The Castle remains in the centre of the village opposite the village green are a Scheduled Ancient Monument (SAM) [CD 8 & 9].
- 3.2 The site is roughly 5km from the boundary of the Brecon Beacons National Park, which runs close to the northern edge of Brecon. The Black Mountains in the east are approximately 17 km from the site. The Central Brecon Beacons to the south, including the peaks of Pen y Fan and Corn Du, are approximately 14.4km from the site. Approximately 6.5km to the north west is the Mynydd Epynt mountain range. The A470 road lies about 3.5km to the south east.

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<sup>1</sup> Above Ordnance Datum

- 3.3 The site's southern extremity is at the junction of the C0223 from Llanddew with another minor road, the C60. Most of the site borders the eastern boundary of the C60, but the northern part lies on both sides of the road and extends to the southern edge of Llaneglwyn Wood. To the east of the site and bordering the southern edge of Llaneglwyn Wood is Llandefalle Common<sup>2</sup> [CD4.2.1; CD18; APP/KH/3 – Figs 1 & 4]. The boundary of the Common abuts part of the north east boundary of the appeal site. The closest turbine, No 5, would be some 160 metres from the edge of the Common. There is a covered reservoir within the southern part of the site. A Scheduled Ancient Monument (SAM), the Twyn-y-Gaer hill fort, lies opposite the reservoir, south west of and close to the C60 road [CD10.1.3 – Fig 2; CD17; CADW.3.1-2]. There is a trigonometry point at 370m AOD on the hill fort.
- 3.4 From its junction with the C0223, the C60 rises gently to the level of the hill fort and then descends quite steeply before rising to pass Llethercynon Farm, which is within the appeal site some 200 metres east of the road. The road continues to rise towards Llaneglwyn Wood, which lies on a hill known as Ysgwydd Hwch. There is a telecommunications mast on this hill serving the Dyfed-Powys Police and other operators [CD10.6.14].
- 3.5 The appeal site and surrounding land is mainly pastoral agriculture on enclosed land (Grade 4 and some Grade 5) and open rough grazing on common land on the adjacent Llandefalle Common. The field pattern is variable, with occasional hedgerows, banks and post and wire fences; hedgerow trees are scarce. There are several small blocks of conifers along the length of the C60 passing the appeal site [LPA.JC/2 – Photos jc02]. Note however that the block of conifers shown on the maps south of the hill fort and west of the C60 has been cleared<sup>3</sup>. Predominantly coniferous plantation woodland occupies the crest of the high ground to the north in the Ysgwydd Hwch section of Llaneglwyn Wood.
- 3.6 Llethercynon Farm is the closest residential property, around 530 metres from the nearest of the proposed turbines. The closest residential properties outside the appeal site are Pencaemelyn, property B1 in the appellant's residential survey [APP.KH/3 – Figs 6a-c; KH/4 - App 7], located 0.68km from the nearest turbine almost due south of the appeal site, and Cwm Gwilym, property C1 located 0.92km to the east.
- 3.7 Several bridleways and footpaths cross or run close to the appeal site [CD4.3 – Sheet SO 03 NE; APP.KH/3 – Fig 1]. Bridleways 11 and 12 cross the northern part of the site. No 11 connects with an east-west route along the edge of Llaneglwyn Wood, extending westward into the wood. No 12 runs south west to the C60, which connects with bridleway 13 also running in a south west direction. Footpath 8 runs north-south through the central part of the site past Llethercynon Farm. Footpath 7 lies south west of the appeal site, running from the C60 west of the Twyn-y-gaer hill fort.
- 3.8 High banks and hedges line the C0223 for much of its length. The ES identifies a section south of the appeal site where 2 heavy goods vehicles could not pass and improvements and traffic management would be required [CD10.1.2 – 3.5.3].

#### 4. Other Sites

- 4.1 The Parc Cynog wind farm is north east of Pendine [APP.DC/5 & 6]. The Council requested I visited this to compare the width of the roads leading to it with that of the roads that would be used to access the appeal site. The route to the Parc Cynog wind farm follows the B4314 south from the junction with the A477 at St Clears. It turns east for Laugharne at the first junction with a country road and then forks right. The private road to the windfarm

<sup>2</sup> In some of the evidence, particularly that of Mr Campion, this is referred to as Onllandefalle Common.

<sup>3</sup> Plan jc02A in LPA.JC/2 shows where this block of conifers was located, alongside the position of Photo 1.

also serves as a farm access. Although there are occasional pinch points and one short section is tortuous with steep gradients, for most of its length to the Laugharne turning the B4314 is of sufficient width for 2 vehicles to pass with good forward visibility. From the Laugharne turning to the right fork the road is of similar width with wide verges. I observed that the carriageway is wide enough for a car and tractor to pass in comfort. The country road is narrower from the fork up to the private access to the windfarm, too narrow for 2 vehicles in parts but there are numerous passing places and visibility along the highway is generally good. The private access is single track for most of its length.

- 4.2 The Blaen Bowi wind farm is alongside the B4333 north west of Cynwyl Elfed and south west of Drefach [LPA.JC/2 – jc05, 05B; CPRW.GS/9 – App B & GS9a]. I was asked to view these turbines by both the Council and CPRW since they are of similar size to those proposed in this appeal, allowing comparison of the photographs of these turbines with their actual size. I viewed the turbines from the positions shown on plan jc05B, corresponding to the photographs jc.05 [LPA.JC/2], which are also on the large board jc05A.

## 5. Site Access

- 5.1 Access to the site for construction and transporting components would be from the A470 via the B4602, the C0223 through Llanddew and the C60 [CD10.1.3 – Fig 5]. An initial trial run of this route using an articulated vehicle was attempted on 18 May 2002 with a trailer first 31m long and then reduced to 29m because of the difficulties encountered [LPA.JAE/14 – Video]. This demonstrated that an articulated vehicle of this reduced length could not negotiate the crossroads in the centre of Llanddew due to the alignment of the C0223 [CD8; LPA.AB/1 - 15].
- 5.2 A second trial run was carried out on 9 March 2004 using a trailer 25.24m long, which I attended. This successfully passed through Llanddew without trespassing on private land and without the removal of any street furniture [CD44 – 2.4]. The trailer used had an option of manual rear wheel steering, which involves a person walking behind the vehicle steering the rear wheels of the trailer independently [APP.DC/4 – App C: Film on CD-ROM].
- 5.3 A full survey of this route prepared for the appellant [APP.DC/4] describes the manoeuvres required to negotiate this route. Because of the acute angle where the C0223 turns north towards Llanddew an articulated vehicle approaching from the east cannot turn right. It is therefore necessary for the articulated vehicle to turn at the junction with the B4602 and then reverse some 300 metres past the Llanddew turning, allowing it to make a left turn. This can be seen in the film of the second trial run. Both trial runs were carried out with police escort to enable this manoeuvre to be carried out. Proposals for traffic management are described in the ES [CD10.1.2 – 3.5.3].

## 6. Planning History

- 6.1 This is set out in Section 3 of the SCG [CD44]. The application documents are in CD10 and the ES is in CD10.1. Additional drawings are in CD10.2 (indicative connection corridor to the National Grid) and CD10.3 and 10.4 (cross sections through borrow pits). The revised site layout is CD10.5.
- 6.2 The application was refused for 5 reasons also set out in the SCG. These relate to the impact on the Brecon Beacons National Park; the impact on Llandefalle Common SLA; the effect on nearby residents in terms of noise and visual impact, highway safety; and the impact on the Twyn-y-gaer hill fort SAM.



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## 7. Planning Policy

### *Development Plan and Other Local Policies*

- 7.1 The development plan covering the appeal site is comprised of the Powys Structure Plan adopted in 1996 [CD3.1] and the Brecknockshire Local Plan adopted in 1997 [CD3.2]. The Brecon Beacons National Park Local Plan is part of the development plan for the National Park [CD3.4].
- 7.2 The relevant Structure and Local Plan policies are referred to in the SCG and are summarised below:
- Structure Plan:
    - EC2 – requires proposals within or immediately adjacent to the National Park to be appropriate and sensitive to its natural beauty and the special character of its landscape and be satisfactorily integrated in the landscape
    - EC3 – requires proposals within or immediately adjacent to designated Special Landscape Areas (SLA) to be appropriate and sensitive to their high quality and special individual character and be satisfactorily integrated in the landscape; all areas of Common Land are designated SLAs
    - EC4 – permits development provided adverse environmental impacts are minimised or avoided by location, design and siting
    - EC5A – permits development that might adversely affect landscape features of major importance only where the reasons for the development clearly outweigh the need to retain the feature and mitigation measures will be provided
    - EC7 – precludes development that would have an unacceptable adverse effect on the open nature, accessibility, landscape or nature conservation value of Common Land
    - EC16 – development that would have an unacceptable adverse effect on sites and landscapes of archaeological or historic interest and their settings will not normally be permitted, especially sites of national importance
    - EC20 – permits development that would generate energy from sustainable sources, most notably wind power, provided a number of criteria are satisfied
    - T3 – permits development where the resulting traffic would be appropriate to the function of each road
    - T12 – development likely to give rise to a significant increase in unsuitable or general traffic will only be permitted where adverse effects are reduced to an acceptable level and there are no other unacceptable problems.
  - Local Plan:
    - B1, B1A, B2, B3 – deal with the protection of sites of international, national and locally designated sites of nature conservation importance; none of these policies are referred to in the reasons for refusal and the Council’s view is that ecological issues can be covered by conditions
    - B7 – permits development within or adjacent to historic landscapes where their character, appearance or setting is not adversely affected
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- B8A – precludes development that would have an adverse effect on the remains or settings of nationally important sites of archaeological interest and SAMs
  - B54A – permits new or improved highways, accesses and traffic management schemes only where a number of criteria are satisfied; these deal amongst other things with the effect on the landscape, on neighbouring residents, and on ecological, historic or archaeological interests
  - B63 – development affecting rights of way will only be permitted where it is incorporated within or adjacent to the development without adversely affecting the safety and enjoyment of users
  - B89 – permits proposals that generate electricity from renewable sources where a number of criteria are all satisfied; these include no unacceptable adverse effect on nature conservation; on features of environmental, archaeological or historic importance; on nearby residents; on highway safety or congestion; and existing rights of way are protected
  - B90 – permits wind turbines subject to compliance with the following criteria: compliance with Policy B89; no unacceptable adverse effect on nearby residents in terms of noise, reflected light, visual dominance, shadow flicker and electromagnetic interference; no unacceptable adverse effect on birds; no unacceptable landscape effect in terms of cumulative impact.
- 7.3 In the National Park Local Plan Policy G3 sets a number of criteria that all development should satisfy. The purpose of this policy is, as explained in paragraph 2.6 of the Plan, to protect the natural beauty and resources of the Park and the amenity of residents, while ensuring that development is sustainable. Policy PU3 permits proposals that would not cause unacceptable harm to the qualities for which the Park was designated, which include its visual appearance; to the enjoyment by the public of the Park’s special qualities; and the amenity of residents. Policy PU4 permits single wind turbines.
- 7.4 A consultation draft of the Powys Unitary Development Plan (UDP) was published in March 2003 [CD3.5]. Policy SP3 seeks to safeguard the landscape and environment of Powys. Policy ENV2 requires that proposals take account of the high quality of the landscape in Powys and be appropriate and sensitive to its character. Paragraph 3.4.5 indicates the Council’s intention to develop a landscape database using LANDMAP [CD38]. Policy ENV17 deals with historic landscapes and Policy ENV18 with SAMs. Policy E3 deals with wind power.

#### *National Policies*

- 7.5 The policies of the Welsh Assembly Government are set out in Planning Policy Wales (PPW) published in March 2002. Relevant sections are as follows:
- para 5.3.4 – the statutory purposes of National Parks are to conserve and enhance their natural beauty, wildlife and cultural heritage and to promote opportunities for public understanding and enjoyment of their special qualities; there is a statutory duty to have regard to these purposes
  - para 5.3.6 – National Parks must be afforded the highest status of protection from inappropriate development
  - para 5.3.7 – the duty to have regard to National Park purposes applies whether activities lie within or outside the designated areas

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- para 5.3.11 – non-statutory designations such as Special Landscape Areas should be based on an assessment of their landscape value; such designations should not unduly restrict acceptable development
  - para 6.1.1 – the Assembly Government’s objectives include the preservation and enhancement of the historic environment and the protection of archaeological remains
  - para 6.5.1 – there should be a presumption in favour of the physical preservation of nationally important archaeological remains and their settings
  - para 6.5.23 – information on landscapes in the second part of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales should be taken into account in considering the implications of development of such a scale that it would have more than a local impact on an area on the Register
  - para 12.8.2 – the Assembly Government is committed to playing its part in delivering a climate change programme which meets UK Government targets of reducing emissions by 20% of 1990 levels by 2010
  - para 12.8.9 – local planning authorities should facilitate development of all forms of renewable energy where they are environmentally and socially acceptable, and make positive provision for such development to meet society’s needs now and in the future
  - para 12.10.1 – where development is likely to have a significant adverse impact on the qualities for which a site was designated, consideration should be given to refusing permission if such effects cannot be overcome
  - para 12.10.2 – whilst having regard to the contributions of renewable energy to wider planning goals, any environmental effects on local communities should be minimised to safeguard the quality of life for existing and future generations.
- 7.6 Technical Advice Note (Wales) 11: Noise (TAN11) [CD2.3] indicates in Table 2 on page 5 that 45 dB is an acceptable external night-time noise level. It also refers to the advice in TAN8: Renewable Energy [CD2.2] for guidance on noise from wind turbines. Annex A of TAN8 deals with wind energy:
- paras A28-38 deal with noise; A28 refers specifically to “The Assessment and Rating of Noise from Wind Farms” published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry [CD21]
  - para A30 indicates circumstances where British Standard (BS) 4142 may not be an appropriate standard for the assessment of wind turbine noise
  - paras A44-54 deal with siting and landscape considerations – the desirability of exploiting a clean, renewable energy resource must always be weighed against the impact on the landscape (A44); special considerations apply in National Parks in view of the very high quality of the landscape that warranted designation (A45).
- 7.7 Welsh Office Circular 60/96: Planning and the Historic Environment: Archaeology gives further advice on the preservation of archaeological remains, which is largely contained within PPW. Paragraph 3 states that the importance of archaeological remains, as evidence of the past development of our civilisation and as part of our sense of national identity, is not necessarily related to their size or popularity. Paragraph 17 states the presumption in favour of the physical preservation of archaeological remains and their settings, explaining
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that this means a presumption against proposals that would have a significant impact on the setting of visible remains.

- 7.8 The Final Report of the Assembly Government's Economic Development Committee on Renewable Energy recommends a benchmark figure for the production of electricity from renewable sources of 4 TWh per year. An overview of the development of UK and National Assembly renewable energy policies is set out in the evidence of Mr Stewart for the appellant [APP.DS/2].

## 8. Other Agreed Facts [SCG - CD44]

- 8.1 The SCG states that the parties agree that the Welsh National target for renewable energy for 2010 is 4TWh to be made up roughly of one-third off-shore, one-third on-shore and one-third other renewables<sup>4</sup>. Installed offshore capacity in Wales is 60MW (0.21TWh) at North Hoyle and additionally approved capacity is 100MW (0.35TWh) at Rhyl Flats. Installed on-shore capacity is 173.6MW (0.46TWh) and additionally approved capacity is 110.7MW (0.29TWh). The Off shore Round 2 licence has been announced as being 750MW (2.63TWh) known as Gwynt-y-Mor off the North Wales coast<sup>5</sup>.

- 8.2 Paragraph 6.2 of the SCG [CD44] sets out installed and permitted wind farm developments in Powys.

## 9. The Case for Windjen

*The main points were:*

- 9.1 The determining issues are as defined in the PIM. Section 54A is the starting point and the House of Lords decision in the 1997 City of Edinburgh Council case (Planning Encyclopaedia Vol 2 P54A.07) makes clear the importance of policy interpretation and confirms that the plan must be read as a whole.
- 9.2 The development plan is the Powys Structure Plan adopted in 1996 and the Brecknockshire Local Plan 1997. The consultation draft of the UDP published last year cannot be given significant weight. The SCG [CD44] identifies the relevant policies in the Structure and Local Plans [CD3.1 & 3.2] but the degree of relevance and interpretation have not been agreed. The only 2 Structure Plan policies relied on in the grounds for refusal are EC2 and EC3; the only 2 Local Plan policies are B89 and B90.
- 9.3 Policy EC2 deals with the National Park and mainly development within the Park. It is submitted that "proposals for development..... immediately adjacent" means just that and cannot apply to a windfarm development some 7km away from the boundary [APP.DS/2 – 8.2]. The landscape and visual effects on the National Park must be assessed in accordance with national policy guidance.
- 9.4 Policy EC3 deals with Special Landscape Areas (SLA) and requires proposals "within or immediately adjacent" to the specified SLAs to be "appropriate and sensitive to their high quality and their special individual character". There are a number of cases where planning permission has been given for windfarms within an SLA and there can be no outright presumption that windfarms are not appropriate in principle either in or adjacent to an SLA [APP.DS/2 – 8.4]. In any event the weight to be placed on this policy is limited because:
- (i) it is only relevant because there is common land nearby – it is the character of the SLA as a common to which regard must be had;

<sup>4</sup> From the Final Report on Renewable Energy by the Welsh Assembly's Economic Development Committee [CD15.2 – Recommendation 2]

<sup>5</sup> Details of offshore projects can be found in Appendix E to Mr Sinclair's policy proof [CPRW.GS/2].

- (ii) the explanatory text to EC3 states that common land is not a landscape designation;
  - (iii) Mr Evans conceded in cross examination that no landscape character assessment was carried out when common land was brought into EC3;
  - (iv) PPW (para 5.3.11) advises that non-statutory designations should be soundly based and should not unduly restrict acceptable development;
  - (v) the emerging UDP [CD3-3.5.2] no longer includes SLAs but relies on character assessment based on LANDMAP and Supplementary Planning Guidance (SPG) (Policy Env2).
- 9.5 Policy EC4 requires adverse environmental effects to be minimised or avoided by use of careful location, siting and design. It must be read in conjunction with EC20, which is not mentioned in the committee report or grounds for refusal even though it sets criteria dealing with renewable energy developments with specific reference to wind.
- 9.6 In the Local Plan Policy B89 deals with renewables and Policy B90 with wind farms. Policy B90 does not address the balancing tests that have to be undertaken if these sorts of energy sources are to be tapped [APP.DS/2 – 9.2]. Policy B8A refers to protection of the settings of SAM and reflects advice in Circular 6/96. Other local plan policies met by the proposal are B1, B1A, B2, B3 and B63. Policy B5.1 (special landscapes) refers only to the Wye Valley and Western Uplands SLA (covering the northern part of the Local Plan Area), with no mention of commons. In summary the relevant development plan policies are EC20 and, to a limited extent, EC3 in the Structure Plan, and B8A, B89 and B90 in the Local Plan.

### *Landscape*

- 9.7 Introducing turbines into a landscape will inevitably change its character to a degree; it is a matter of subjective judgement whether the change is positive or negative. But national policy advice does not presume against the principle of wind energy development because some people affected will regard it as unwelcome [APP.DS/2 - 11.7.1]. Nor should the designation of an adjoining landscape as a SLA carry any greater presumption, bearing in mind the substantial areas of uplands so designated and the inevitability of development taking place in the area if any significant wind energy development is to take place within Powys [APP.DS/2 - 11.7.2]. Reasons for refusal 1-3 require a full study of the potential effects on the landscape of the site, on the character of the surrounding landscapes, on the purposes of the landscape designations in the area, and on the visual amenities of receptors.
- 9.8 The landscape character assessment in the ES [CD10.1.2 – Chapter 5] was done in accordance with interim guidance being prepared for the Countryside Agency in England and Scottish Natural Heritage [APP.KH/2 – 19-22]. This has subsequently been published [CD6]. The evidence for the inquiry relied on the same methodology verified by fieldwork observation, since the LANDMAP [CD38] data for Brecknockshire was not available. A study area encompassing a 15km radius from the appeal site was divided into 4 Landscape Character Areas (LCA) and field surveys were carried out [APP.KH/4 – App 6]. The appeal site lies in the ‘High Undulating Plateau’ [APP.KH/2 – 58-67, Tables 1-4]. The turbines would have a significant effect on the character of this LCA in the vicinity of the site but would not have a significant effect on the other three LCA [APP.KH/2 – 68-83].
- 9.9 The landscape and visual impact assessment in the ES was carried out in accordance with guidance published by the Landscape Institute and the Institute of Environmental assessment [APP.KH/2 – 23; KH/4 – App 2]. A second edition published in March 2002 [CD7.1] introduced a number of changes to the methodology [APP.KH/2 – 24-26]. The guidance suggests that changes affecting large numbers of people are generally more significant but the appellant’s assessment considers the likely numbers affected when deciding whether the predicted change would be acceptable. The guidance now emphasises

the need for practitioners to use professional judgement when applying the guidelines and making an impact assessment. The project has been re-assessed using the latest guidelines and the conclusions are largely in line with the findings in the ES [APP.KH/2 – 31].

9.10 The Council's limited criticisms of the methodology and conclusions of the appellant's landscape witness were effectively confined to:

- consistency in the application of the methodology of the baseline character assessment in the ES; but this took no account of the witness' reassessment and the Council's landscape witness agreed in cross-examination that his conclusions were broadly in line with that re-assessment;
- that the High Undulating Plateau LCA identified was too coarse a classification as a basis for subsequent assessment of landscape and visual impacts; and
- the failure of the ES to acknowledge the LANDMAP methodology or to refine the original assessment.

9.11 But there was a remarkable level of agreement between the appellant's and Council's witnesses on the Visual and Sensory Aspect areas (VSA) assessed by the Council using LANDMAP and the overall significance of landscape and visual effects from the ES viewpoints. There were only minor differences on Brechfa Pool and Pen y Fan. The Council's witness assessed his additional viewpoints without the benefit of wire frame diagrams and accepted in cross-examination that he was perhaps more severe in his assessment of magnitude of change and significance. His assessment of 'substantial' magnitude of change at 9.8km and 'moderate' at 10.4-15.5km [LPA.JC/1 – Table p34] is at odds with his assessment of the appellant's viewpoints, which found 'substantial' at 1.1km and 1.2km, 'moderate' at 5.4km and 6.1km, and 'slight' at 10.6km, 7.7km and 14.4km [LPA.JC/1 – Table p33]. He concluded that there would be a significant landscape effect upon the Twyn-y-Gaer VSA immediately surrounding the appeal site and adjacent Llandefalle Common VSA [LPA.JC/1- 4.9] but formed no conclusion on the remainder.

9.12 CPRW had no fundamental criticism of the appellant's landscape assessment. Mr Sinclair accepted in cross-examination that heavy qualifications must be put on the use of the Sinclair-Thomas Matrix method [CPRW.GS/9]. Great caution must be used when applying it to magnitude of change and significance. But again there seems little disagreement on landscape character or viewpoint. CPRW produces overall only three representative viewpoints of "independent significance", suggesting a rather low visual impact [CPRW.GS/9 – 2.9.7-9]. Mr Sinclair accepted that it would be possible to produce any number of viewpoints but the purpose was to produce representative viewpoints. His approach to 'contributory significance' is not valid in terms of environmental impact assessment, which seeks to identify significant effects, not all effects. Neither the Council's nor CPRW's witness go on to make any overall analytical judgement on acceptability. In practice as the ZVI demonstrate [APP.KH/2 – 47-53; KH/3 – Figs 2a-c], the extent of even potential views of the turbines within 5km of the site is remarkably constrained. The ZVI do not take account of the screening effects of vegetation and buildings.

9.13 It is a myth that photomontages compress the vertical scale. The photomontages follow the accepted methodology and use a 50mm focal length lens to replicate the field of view of the human eye [CD7.1 – App 9]. The difficulty lies in the way in which the eye and brain interpret photographs and they must be viewed at the correct distance. But they are only an illustration and the assessment is done in the field; the conclusions on visual impact are not based on the photomontages. These and the wireframes are tools, but are nonetheless important. They are accurate and can be relied on. The analysis is transparent and thorough. It must be remembered that significant visual effects are not necessarily adverse and may not be perceived as such by those living, travelling through, or visiting the area.

- 9.14 Analysis of the effect on the National Park must take account of the purposes of designation and its special qualities, which are defined in the Park's Management Plan [APP.KH/2 - 86-7; CD3.6, 3.5]. It is not enough to argue that proposals visible from the Park will be unacceptable, the approach adopted by the National Park [LPA.BBNP/1 - 4.2]. The suggestion by their witness in cross-examination that hilltops and vantage points within 10km are in the immediate vicinity cannot be correct.
- 9.15 The turbines would not compromise the twin purposes of the National Park, as they would not significantly affect the special characteristics that underpin those purposes [APP.KH/2 – 87, 99; CD3.6 – para 3.5]. None of the Park's special qualities would be affected except, potentially, views from footpaths and bridleways [APP.KH/2 – 261-3, 290]. No significant change of view is likely apart from Pen y Crug [APP.KH/2 – 139] where:
- the qualities of remoteness peace and tranquillity are already affected by the A40 and proximity of Brecon, as accepted by the Park's witness in cross-examination;
  - the area is popular with Brecon residents for walking, dog exercise and horse riding as confirmed by the Council's landscape witness [LPA.JC/1 - 4.48], a purpose quite separate from walking in the Brecon Beacons; and
  - the view from Pen y Crug is mainly towards the National Park and the Usk Valley as in the Pathfinder Guide [LPA.JC/4], accepted by Mr Rolt in cross examination.
- 9.16 The Hilltop decision is relevant to the approach to distance [APP4.7]. This related to a scheme of 6 Wind Turbine Generators (WTG) with a height of 71 metres overall (para 15). That scheme was refused, being just north of the Lake District National Park (para 32). But the Inspector concluded (para 48) that at distances of over 5km the impact would be moderate at most and would have only a slight to moderate impact upon the landscape character of the National Park. In the Wharrel's Hill decision [APP4.14] the Inspector concluded on a scheme of similar size that at distances of some 6-7km the magnitude of impact would be considerably diminished and the proposal would be seen as part of the essentially man-made and managed landscape (para 34). Mr Evans for the Council agreed that seen from beyond 5km into the Park the impact would be less, at odds with the approach of the witness from the National Park Authority. Apart from a 25 turbine scheme at Barningham 5.2km distance away which also affected an AONB, no scheme more than 3.5km away from a National Park boundary has ever been refused on appeal on National Park grounds and many have been approved within 3.5km [APP.DS/6]. On the basis of the evidence it is inconceivable that National Park purposes would be affected by the proposal.
- 9.17 The landscape quality of Llandefalle Common is medium; its scenic quality is pleasant and the landscape has a good sense of place. The turbines would become one of the defining characteristics of the landscape within about 2km of the nearest turbine and so would have a significant effect on the character of its landscape. But the turbines would not affect the clarity, distinctiveness, intactness, balance, condition or sense of place of the landscape and so would not reduce its landscape quality [APP.KH/2 – 102-4]. This agrees largely with the Council's assessment as far as landscape character is concerned but not on quality. Their witness concludes there would be a significant adverse landscape effect overall [LPA.JC/1 - 4.9] despite the LANDMAP assessment [LPA.JC/1 - 3.16] that gives an overall evaluation of moderate, defined as a Landscape of Local Importance in the LANDMAP methodology. These are hardly the qualities that would justify SLA designation.
- 9.18 Analysis of 7 representative viewpoints indicates significant changes in views from some residential properties; for people working within 3km; from some footpaths, bridleways and roads within 3km; and for walkers, horse riders, cyclists and motorists using these [APP.KH/2 – 108-139; Table 6 page 38; 273]. The development would result in a significant change in the view for walkers, horse riders and cyclists on Llandefalle Common

and for commoners [APP.KH/2 – 120-1]. However, there is a clear distinction between landscape quality and viewpoints. The affected viewpoints are not by any means unique, as accepted in cross-examination by the witness from CCW and by Mr Wingfield for BAWT. From other parts of the common the turbines would intrude less, if at all, in the views to the south, also accepted by CCW. Their witness suggested that this was one of the few areas left in Wales with long distance views, but this is simply not correct. Even so, views from within the vicinity, from other nearby commons, hill forts and minor roads, as well as from the eastern part of Llandefalle Common, would not be affected. An effect on a viewpoint from part of the common cannot be material having regard to the many other locations from which that view can be obtained.

9.19 The development would not have any effect on the quality or character of the Wye Valley SLA [APP.KH/2 – 100]. It is not referred to in the evidence of the Council's landscape witness and does not appear to have been seriously pursued by the Council.

### *Noise*

9.20 TAN8 advises that BS4142 may not be suitable for assessing wind turbine noise in rural areas such as this, where background noise levels are below 30 dB(A) [CD2.2 – A29-30]. Noise impacts have therefore been assessed using 'The Assessment and Rating of Noise from Windfarms: ETSU-R-97' [CD21; APP.MDH/2 - 4.3.1]. The working group that prepared this report was representative of the industry and local authorities, and included independent noise consultants. The report recommends absolute noise levels to protect neighbours and avoid sleep disturbance [CD21 – Executive Summary, paras 21-24; APP.MDH/2 – 3.2.2-3]. The recommended noise levels from a wind farm are:

- 5 dB(A) above background for both day time and night time; and
- where background noise is below 30 dB(A), an absolute level within the range 35-40 dB(A)  $L_{A90}$  during day time and a night time absolute limit of 43 dB(A)  $L_{A90}$ , with limits increasing to 45 dB(A)  $L_{A90}$  where the occupier has a financial involvement.

9.21 For the ES, background noise measurements were carried out at Cwm Gwilym [CD10.1.2 – 8], which is 0.92km away from the nearest turbine. Predictions for the ES were made of noise levels at a number of dwellings based on a Nordex N60 1.3MW turbine<sup>6</sup>. Further background measurements at 6 more properties were carried out after the PIM from 17-31 March 2004 and the results analysed using the ETSU regression analysis methodology [APP.MDH/2 – 4.3.1-6, Table 1; MDH/3 – Appendices 1-4]]. These confirm the low background noise environment of the appeal site, which is similar to Blaen Bowi [APP.MDH/12]. Using the ETSU guidelines controlling noise levels were set at the closest properties [APP.MDH/2 – Table 3, page 23]. Predicted noise levels were again based on the Nordex N60 1.3MW 2-speed turbine, which operates at a lower rotational speed and hence is significantly quieter below wind speeds of 5 ms<sup>-1</sup> [APP/MDH.2 – 4.4.1]. Predicted turbine noise levels at a number of properties [APP.MDH/2 – Table 6, page 31] demonstrate that the wind farm would meet the ETSU-R-97 criteria assuming the worst case, indicating there would be no unacceptable adverse effect on the amenity of nearby residents [APP.MDH/2 - 4.5.1.3-4 & MDH/4].<sup>7</sup>

9.22 The Council's calculations of background noise levels [LPA.GR/25 – 4.2 & Tables 1-6] to allow for alleged errors and assumptions in the methodology indicate that at 5dB above

<sup>6</sup> Para 8.1 of the ES incorrectly states that predictions were based on a BONUS turbine; Appendix E of the ES is correct.

<sup>7</sup> These graphs replace MDH/3 – App 6, which contained an error. The relevant line on each graph is that for the predicted  $L_{A90}$ , which is the measure used for the ETSU criteria.



background 1.0-3.5km between residential properties and turbines would be needed, and 6-22km would be needed to secure 10db below, excluding huge areas of the country. The noise levels must be set in context. A noise of 32-33 dB  $L_{Aeq}$  is equivalent to a quiet whisper at roughly 3 metres; 26 dB a quiet whisper at about 6 metres; and 20 dB a quiet whisper at around 12 metres. The Council also questions the use of polynomial curves to average background noise levels [APP.MDH/3 – App 4]. But predicted levels are based on a worst case assessment and so compare highest levels from the windfarm with levels that are exceeded for most of the time [APP.MDH/2 – 4.4.2].

- 9.23 The Council suggests that given the latest WHO night-time guideline of 30 dB (A) [LPA.GR/6], the external night-time criterion for prevention of sleep disturbance should be 40dB  $L_{Aeq}$  rather than 45dB  $L_{Aeq}$  as suggested in ETSU-R-97 [LPA.GR/21 - 8.20]. But an examination of noise standards in 1998 for the Department of the Environment, which reviewed the WHO guideline, concluded it would be unwise to adopt it [APP.MDH/5]. Furthermore, the ETSU report considers the WHO guideline [CD21 – pages 30-32]. In any event, the WHO night-time criterion would be met at lower wind speeds [APP/MDH/8]<sup>8</sup>. At higher wind speeds background noise levels are likely to exceed turbine noise. The only property apart from Llethercynon Farm itself where turbine noise would be likely to exceed the background by an appreciable amount (for  $L_{Aeq}$  not  $L_{A90}$ ) would be Pencaemelyn, which is owned by the appeal site owner [APP.MDH/10]. Even here this would only be in a north-easterly wind, at high wind speeds, with windows facing the wind wide open. Furthermore, the ETSU report recommends that noise from the wind farm is measured and assessed in  $L_{A90}$  as this allows reliable measurements avoiding distortion from loud, fleeting noises.
- 9.24 The Council argues that the ETSU report gives no special consideration to low frequency noise [LPA.GR/21 - 8.22]. But a study for the Vale of White Horse District Council of a Bonus 1.3MW turbine showed that the level of low frequency noise was below the hearing threshold of most people [APP.MDH/6]. Analysis of a Nordex N80 turbine using threshold levels established by Watanabe and Moller [LPA.GR/12 – Fig 6] shows that all measurements below 20 Hz would be below the threshold of audibility even for the most sensitive 5% of the population [APP.MDH/11]. Predictions of low frequency noise levels for a Nordex N60 at wind speeds of 8ms<sup>-1</sup> and 10ms<sup>-1</sup>, assuming a 10dB reduction for internal attenuation, show results at 8ms<sup>-1</sup> similar to the Danish 20  $L_{pA,LF}$  standard [APP.MDH/7; LPA.GR/12 – 15.5.3]. Properties other than Llethercynon and Pencaemelyn would exceed that standard at wind speeds of 10ms<sup>-1</sup> but at such speeds there would be other low frequency noise from wind turbulence.
- 9.25 With regard to the suggestion that variable speed turbines should have been considered, those available either have gearboxes with associated tonal noise or are much larger turbines that would be too large to transport to the site. Noise predictions for the removal of the foundations, the noisiest element of these operations, show that the noise levels would meet the recommendations in BS5228 and would hence be acceptable [APP.MDH/9].
- 9.26 In summary there are 3 important points. First, the appellant's noise consultant has been involved with over 135 windfarm sites in this country and abroad, and was a member of the Working Group on Wind Turbine Noise sponsored by ETSU for the DTI. The Council's noise expert stated in cross examination he had carried out sound power measurements for 4 or 5 wind turbines and to have reviewed 3 or 4 ES for local planning authorities. Second, the appellant's consultant explained in answer to the Inspector how his monitoring of windfarms had found noise levels generally to be within 0.5 dB below the predicted levels.

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<sup>8</sup> These tables show a night time criterion based on the WHO internal guideline of 30 dB  $L_{Aeq}$ , which translates to an external figure of 38 dB  $L_{A90}$  allowing 10 dB for attenuation and deducting 2 dB to translate from  $L_{Aeq}$  to  $L_{A90}$ .

In his experience predicted levels had not been exceeded and the monitored levels could be as much as 5dB below predictions, which gave confidence in the predictions and confirmed that the methodology adopted reflected the worst case. Third, ETSU is now well recognised. It is referred to in TAN8 [CD2.2 - A28], is recommended as good practice in Scotland (PAN 45), is proposed in draft PPS 22 [CD16.2] and is widely adopted by Inspectors. The Council's noise expert under cross-examination could not mention a single appeal decision where it had not been accepted as best practice. In the recent windfarm appeal decision on Darracott the Inspector requested at the PIM that ETSU-R-97 methodology was adopted and concluded that there were problems with BS4142 [APP4.24].

### *Other Effects on Neighbours & Properties*

- 9.27 The visual impacts on neighbouring residents are not addressed at all in the evidence of the Council's landscape witness. The appellant has carried out a thorough survey of the views from all properties in the ZVI within approximately 6km of the nearest turbine [APP.KH/2 – 140-156; APP.KH/4 – App 7]. This shows that, in the case of farmsteads and individual properties, residents in only a small proportion would experience a significant change of views [APP.KH2 - 155/156]. This evidence was not challenged. All properties not connected with the development would be around 1km or more from the turbines. The turbines would be prominent in views from Rhos Farm and Cwm Gwilym [APP.KH/4 – App 7, A1; APP.KH/5 – App 11] but would not dominate views from those houses. The development would not have an unacceptable adverse effect on the amenity of nearby dwellings [APP.KH/2 – 288].
- 9.28 PPW (paras 4.1.7-8) makes clear that the planning system does not exist to protect the private interests of one person against the activities of another. Proposals should be considered in terms of their effect on the amenity and existing use of land and buildings in the public interest. The effect of the proposed wind farm on neighbouring residents would not be significant and would be insufficient to amount to a matter of public concern [APP.DS/2 – 11.8.1; APP.KH/2 – 288].
- 9.29 Dealing with other matters, intermittency and grid capacity are issues recognised in the White Paper [CD20]. Government policy remains unequivocal in its support of renewables and onshore wind [APP.DS/2 - 16.2]. Shadow flicker is not a concern of the Council and is dealt with in the ES [CD10.1.2 – 10.5]. It can only occur where there is an uninterrupted line of sight between a window and turbine, when there is a narrow window opening and the blade passing frequency exceeds 2.5Hz. At the rotational speed of modern turbines the frequency of the blade shadow passing a window would be less than 1Hz, which is too low for any adverse effect. The ES confirms the frequency of the proposed turbines would be less than 1 Hz. Software can be installed to switch off turbines in conditions where shadow flicker might occur [APP.DS/2 - 16.3]. Electromagnetic interference could be dealt with by conditions as stated in the ES [CD10.1.2 – 9.0]. Whilst it is entirely proper to consider the effect on residential amenity, the effect on property prices is not a material planning factor. Recent court decisions have not altered that position [APP.DS/2 - 16.5].

### *Transport Issues*

- 9.30 Since the refusal a full route survey has been carried out to confirm the feasibility of transporting the turbine components to the appeal site [APP.DC/4]. This contains swept path diagrams for the various components at the various junctions on the route. A second dummy run using a vehicle that would carry turbine blades has also been successfully conducted to demonstrate the feasibility of the route [APP.DC/4 – App C]. This took 52 minutes in all, which was slow; in practice it would take half that time from the A470 to the site. Two blades would be transported per load, giving 9 loads for the 6 turbines. In

addition there would be 6 loads for the nacelles and 18 loads for the towers, which would be in 3 sections<sup>9</sup>.

9.31 The maximum width of the base section of the Nordex N60 tower (at the flange) is 3.82 metres and not 4.5 metres as the Council suggests [LPA.AB/5].<sup>10</sup> Components would be transported to the site on vehicles with automatic rear wheel steering and for both blade and bottom tower sections there would be the option of manually steering the rear wheels [APP.DC/4 – App B, Figs 79601-40Amansteer & 40Bmansteer]. Police escort or private patrol cars could assist with the larger loads although these would not be abnormal loads.

9.32 The Council’s highways witness confirmed in cross-examination that:

- there is no longer an objection on grounds of the suitability of the roads leading to the site;
- all necessary works to the highway could be carried out within the highway boundary and dealt with by negative condition;
- concerns over numbers of construction vehicles could also be resolved by traffic management measures to be agreed under a condition, combined with the proposed highway works;
- whilst the Council might have wanted to see some details of the necessary traffic management measures submitted earlier, a scheme could be developed to deal with larger loads and additional volumes of traffic;
- the loaded height of the trailers would be under 5 metres and both this and the width of the turbine would be within the normal highway trimming area; and
- there remain no other highway problems and the draft conditions would overcome the Highway Authority’s concerns on traffic management and congestion.

#### *Scheduled Ancient Monument*

9.33 There is no statutory definition of setting [APP.KH/2 – 205; CD5.03 – page 20]. Factors which influence the definition of the setting of a SAM are [APP.KH/2 – 211]:

- the visibility of the remains - the setting of visible remains can only be appreciated at distances within which the remains themselves are visible;
- the context of the remains – where the immediate or wider landscape displays characteristics or contains features that are of a similar time frame; and
- the functional relationship – where the original function of the monument was closely tied to its location (eg a hill fort on a hill top) then the hill or hilltop may form the immediate setting, whilst the wider setting may extend into the surrounding landscape.

9.34 A number of factors need to be borne in mind in assessing possible indirect impacts. Turbines 1 and 2 would be located approximately 300m away in undulating landscape [APP.KH/2 – 213]. Because of the rising ground to the east the position of the SAM is not ideal for a defensive structure [APP.KH/2 – 218]. The extract from ‘A Guide to Ancient and Historic Wales – Clwyd and Powys’ [CD17] relegates Twyn-y-Gaer to an Appendix (Sites of Further Interest) and describes it as a “hilltop enclosure” rather than a ‘hill fort’. But Pen-y-Crug is described in the main text as a hill fort [CADW.SR/3.7 – P70]. The archaeological assessment in the ES undertaken by the Clwyd Powys Archaeological Trust [CD10.1.2 – Chpt 7] suggests that it may have been an enclosure used for settlement and its function may have been agricultural and domestic rather than defensive [APP.KH/2 – 217]. The immediate setting of the visible remains can only be appreciated within the vicinity of

<sup>9</sup> The details on pages 11-12 of the report APP.DC/4 are incorrectly based on 10 turbines.

<sup>10</sup> Note: the dimension of 3.82m in the letter APP.DC/1 is incorrect; the Nordex brochure LPA.AB/5 gives the correct dimension on page 3, in the first column of the table for the N60, for a type GL1 46m hub height turbine.

the site, extending to approximately 300m from its centre. The setting to the east has been disrupted by the minor road, post and wire fences, telegraph poles, and triangular conifer plantation so that the immediate setting extends only as far as the road [APP.KH/2 – 220; LPA.JC/2 – jc02, View 1]. The article ‘Ancient Settlement Patterns in Mid Wales’ [CD17] shows field and enclosure patterns around Twyn-y-Gaer Hill Camp west of the minor road; nothing is shown to the east.

- 9.35 In longer distance views [CADW.SR/3.5] the hill fort is not a clearly distinguishable feature in the landscape and to the layman the context of the remains is hard to define<sup>11</sup>. Some of the wireframe diagrams previously prepared show the turbines from the position of Cadw’s photographs [APP.KH/5 – App12; KH/6.0.1]. But views of the hillfort are restricted from the road and from the footpath to the west by the landform, trees and hedges [APP.KH/6.0.3 – *shaded areas indicate where hillfort cannot be seen*].
- 9.36 It is important to distinguish the area where there are long views from the immediate setting. It is the shorter views that are critical since this is where the hill fort can be properly seen, looking north and south along the road, and from the road adjacent to the monument. From the footpath to the west the distance is greater and although the turbines are in view, the observer is outside the setting looking in [APP.KH/5 - App12, Figs 1, 2, 4].
- 9.37 Its wider setting is less clearly defined but any essential lines of sight to other Iron Age hill forts would not be affected [APP.KH/2 – 226-30; APP.KH/3 – Fig 7]. Views out were agreed by the witness from Cadw in cross-examination to be primarily to the NW, N-SW and SE, with a more limited view to the east.
- 9.38 It is submitted that the Ton Mawr Farm, Margam decision [CADW.SR/3.4] offers no support to Cadw bearing in mind that this proposal does not have any direct effect on archaeological remains and is not located in a historic landscape. Further, at Margam the distances involved, both individually and cumulatively, between turbines and SAM or the historic track were of a different order, ranging from 20-150metres [CADW.SR/3.4 - paras 11.6.3, 11.6.5 & 11.6.10].
- 9.39 Wind turbines are reversible, having a lifetime of 20/25 years. The Cadw witness acknowledged that reversibility was material. In the St Breock appeal decision [APP/4.25] the Inspector described the proposed turbines (para 33-34) as a complementary and appropriately awesome presence in the vicinity of the scheduled monuments and sympathetic to the remote setting of these monuments. It is a matter of judgement first whether the turbines can in any way affect the appreciation of this SAM, and even if they can, whether the turbines would be complementary rather than inappropriate.
- 9.40 Above all however the policy test is whether there will be a significant impact on the setting of visible remains [CD2.5 - para 17]. It is submitted that from those points where the remains are clearly visible the impact of the nearest turbines will be insignificant [APP.KH/2 – 213-231].

### *Historic Landscape*

- 9.41 Within 20km of the appeal site there are 2 areas on the Register of Landscapes of Historic Interest in Wales [APP.KH/3 – Fig 3]. These are the Middle Usk: Brecon and Llangorse Landscape of Special Historic Interest on Part 2.2 of the Register and the Middle Wye Valley Landscape of Outstanding Historic Interest on Part 2.1 [APP.KH/4 – App 8].

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<sup>11</sup> The appellant has drawn the turbines to scale on Cadw’s photographs [APP.KH/6.0.2]

- 9.42 It is unclear to what extent the effect on the Historic Landscape represents a serious concern of the Council or Cadw. It is not part of the reasons for refusal and Cadw's evidence goes no further than stating that there will be an impact on the Middle Usk Valley: Brecon and Llangorse Landscape of Special Historic Interest by virtue of visibility from a significant proportion of the historic landscape. This needs to be kept in perspective because, first, the superimposition of its approximate boundary onto the ES ZVI [CADW.SR.3.5] demonstrates how limited the potential visibility of the turbines would be from within the Historic Landscape [APP.KH/2 – 196]. Second, the advice in PPW [CD2.1 - 6.5.23] is that information on the landscapes in the Register should be taken into account by local planning authorities in considering the implications of developments of such a scale that they would have more than local impact on an area on the Register.
- 9.43 The change of views from the Brecon and Llangorse Historic Landscape would only be significant at Pen-y-Crug. But this localised significant visual effect would not undermine the integrity of the area, reduce its historic significance or reduce the enjoyment of people visiting the area [APP.KH/2 – 194-8]. Cadw's witness agreed at the inquiry that even this impact would be very slight.
- 9.44 The turbines would be at least 5.5km away from the Middle Wye Valley Historic Landscape and views of them would be limited to greater distances, so that there would be no significant change in views. The integrity and historic significance of the area and its enjoyment by visitors would not be affected [APP.KH/2 – 199-204].

*Tourism and the Economy* [APP.DS/4]

- 9.45 This is a common feature of wind farm inquiries. It was not put forward as a ground for refusal. The committee report states that many objectors had referred to the impact on tourism but no hard evidence had been submitted to support this and that there were insufficient reasons to refuse permission on this basis [CD11 - 13.9]. Mrs Daniel had been given information by the Wales Tourist Board (WTB) over the telephone about Denmark and Scotland and had a 2003 WTB survey [LPA.JAW/13]. But she confirmed in cross-examination she had read neither and the Visit Scotland Report was wrongly interpreted as supporting her case [APP.DS/4 – App 8]. The survey reports that most respondents in the tourism trade were more positive than negative towards the impact of wind farms. In the visitor survey, three-quarters of respondents were either positive or neutral towards wind farms, whilst 21% were negative. Although 29% considered that wind farms detracted from the experience of the countryside when prompted, 18% considered it enhanced the experience. Only 1 person mentioned wind farms as something they disliked without being prompted. As to Denmark, the Danish Tourist Board in London is not aware of any survey or of any adverse impact on the number of tourists visiting the country.
- 9.46 The Assembly's Economic Development Committee [CD15.2 - Annex A, para 7] concluded that there is no objective evidence available as to whether wind turbines increase or decrease tourist interest in an area. Tourism surveys and research studies have been carried out in Anglesey, Cornwall, Ireland, Cumbria and Scotland, under the supervision of the WTB and for the Friends of Lake District [APP.DS/2 – Sect 12; APP.DS/4]. None of these indicate that wind farms have any adverse effect on tourism. The survey for the Welsh Tourist Board indicates that for 68% of visitors wind farms make no difference to whether they would return, 9% say it would have minimal impact, and only 2% say they would be less likely to come back. Research by a student from Holland supervised by the WTB [APP.DS/4 – App 9] found that 96% of respondents would not be put off visiting Wales by more windfarms. A study by Leeds Metropolitan University for the Friends of the Lake District [APP.DS/4 – App 10] reported that 75% of visitors would not be put off visiting by significantly more wind farms. Although 22% said they would return less often, this does

not mean that the Lake District would lose 22% of its tourists. Cornwall and Cumbria have the highest concentration of wind farms in England but visitor numbers are increasing. This evidence was not challenged.

- 9.47 In the Darracott decision [APP/4.24] the Inspector concluded that that he was far from convinced that the scheme would risk jeopardising “*either the attractions of the area for tourists or the tourism potential of this place*”. No evidence has been provided in this appeal of actual harm to tourist interests, only fear of what could happen.

#### *Site Selection*

- 9.48 There is no requirement to look at alternative sites [APP.DS/2 – Sect 10.2]. Those considered in the ES [CD10.1.2 – 2.4] as part of the site search were not alternatives for EIA purposes. The implication of Schedule 4 of the Regulations [CD1.1] is that if alternatives are studied they must be outlined and reasons given for the choice made. In cross-examination Mr Evans for the Council accepted the validity of the reasons given by the Inspector in the Mynydd Clogau wind farm decision for rejecting the need to consider alternative sites [APP/4.13 - para 11.1.52-3]. In the Wogaston decision [APP/4.10 - para 29] the need for a rigorous examination of alternative sites in the vicinity arose after the Inspector had concluded that the scheme was unacceptable on other grounds, and not out of a failure to carry out a site selection exercise.

#### *Public rights of way – Horses*

- 9.49 The representative of the British Horse Society (BHS) expressed particular concern over the effects of the turbines on the Three Rivers Ride, which it emerged passes approximately 300m to the north of turbine 5, well beyond even the BHS's own recommended minimum guidance [CD4; APP.KH/4 – Fig 1; CD10.1.2 – 10.2]. She could not explain what research had led to the BHS recommended guidance or on what size turbines with what rotation or start up speeds. Nor was she aware of factors affecting ice on turbine blades. No evidence was offered on usage of other local bridleways.
- 9.50 The committee report [CD11 - 8.4-5] confirms that the Council's Rights of Way Officer did not object to the application. It also refers to TAN 8, which does not specify any separation distance from bridleways or footpaths but indicates that, to achieve maximum safety, a set back of at least the height of the turbines from roads would be advisable [CD2.2 – A26]. It also refers to the Cemmaes B decision where BHS's view that a 200 metres separation is required from a bridleway was not accepted [APP4.2 – 15.24-6]. It is sudden movements or noises that startle horses and there is no evidence that wind farms cause such problems. Both the Cemmaes and Delabole wind farms have bridleways through them. If the turbines are visible from the distances mentioned by the objectors there would be adequate warning for riders and horses.

#### *The need for and benefits of the proposal*

- 9.51 Emissions from fossil fuels are a major contributor to the increase of greenhouse gases and global warming [APP.DS/2 – 4]. The UK Government has adopted increasing targets for renewable energy generating capacity, from 1000MW by 2000 (This Common Inheritance 1990) to a 5% target by 2003 and 10% by 2010 (New and Renewable Energy Prospects for the 21<sup>st</sup> Century 1999). Ministers have stressed the importance of renewable energy [APP.DS/2 – App 1a-d]. In 2003 the UK Government published an Energy White Paper [CD20] confirming a 20% target by 2020 and a 60% reduction in the UK's carbon dioxide (CO<sub>2</sub>) emissions by 2050. To reach the 2010 target 1250MW of renewable generating capacity will need to be built annually for the next 7 years. Only 1200MW has been built to

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date excluding large hydroelectric schemes. On-shore wind remains a key element of the renewable supply sector up to 2020.

- 9.52 The Welsh Assembly Government is equally committed to renewable energy, as confirmed by a motion approved in May 2000 [CD35]. The Final Report on Renewable Energy by the Economic Development Committee in January 2003 recommends a benchmark of 4TWh per year of electricity from renewable sources [CD15.2 – 5.5]. The National Assembly should promote a vision for renewable energy that emphasises safe, clean and secure energy supplies and contributes positively to reducing global warming [CD15.2 – 5.15].
- 9.53 Various figures for emission savings have been used [APP.DS/2 – 5]. The Department of Trade and Industry calculates that emission savings from on-shore wind are about 946gm of CO<sub>2</sub> for every Kilowatt-hour of electricity generated. The British Wind Energy Association (BWEA) suggests 863gm. Opponents suggest 640gm in view of the use of more efficient and cleaner forms of generation. Renewable sources tend to displace power generated from the marginal generators, the older coal-fired plants, some of which generate 1040gm of CO<sub>2</sub> per kWh. Assuming this windfarm operates at around 30% of its 7.8MW capacity, the average in Wales, it would generate 20.5 million kWh a year. This would produce CO<sub>2</sub> savings each year of 17,691 tonnes using the BWEA figure or 13,120 tonnes using the more conservative figure suggested by objectors, a substantial saving in both cases. Studies in Denmark have shown that the ‘pay back’ time for energy to construct the windfarm would be as little as 3 months [APP.DS/2 – 5.3; CD15.2 – Annex A, para 6]. In addition to the emission savings, the windfarm would supply the domestic electricity requirements of some 4,720 homes. There would also be local economic benefits from the construction work, rental payments to local farms, service jobs and local demands for equipment and materials. This is in the context of the creation of 2,200 full-time equivalent jobs nationally directly in the renewable energy sector and supporting services. And the scheme would help to meet the Government target of providing 10% of national demand from renewable sources by 2010. This must be given considerable weight in terms of the contribution from an accumulation of such developments.
- 9.54 Planning Policy Statement 22: Renewable Energy (PPS22) has been published as a draft for consultation [CD16.2]. It is important as a statement of emerging Government policy. It reflects increasing Government concern that the planning system is an impediment to achieving renewable energy targets. Local planning authorities should not adopt policies precluding renewable energy developments from much of their area. Local landscape designations or buffer zones around national designations will not be acceptable. The planning system should give weight to the wider benefit of renewable energy schemes rather than concentrating on visual impacts. This emerging policy approach is particularly relevant to this appeal where the effect on a National Park some distance away is cited.
- 9.55 PPW starts from the principles of sustainable development [APP.DS/2 – App 2]. It advises that a key role of the planning system is to ensure that society’s land requirements are met in a way that does not impose unnecessary constraints on development while ensuring that all reasonable steps are taken to safeguard the environment. Local landscape designations should not unduly restrict acceptable development. On renewable energy, the planning system is expected to drive the current level of renewable energy developments forward in line with the UK targets. TAN8 recognises the need to compromise the aims of maximising energy capture from a site and minimising visual impact [APP.DS/2 – App 3]. The TAN recognises the inevitability of siting windfarms on uplands, the coast and other exposed areas. The desirability of exploiting a clean, renewable energy source has to be balanced against landscape impact. The effect on ecology should be minimal and danger to bird life

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should be minimal on the basis of studies to date. It makes no reference to archaeological issues or landscapes of historical importance.

- 9.56 CPRW questions the need by suggesting [CPRW.GS/2 – 2.1] that there is a policy move away from land based wind power towards offshore wind and other forms of renewable technology, and that decisions on problematic onshore wind proposals may be more safely refused planning permission. It has in the past opposed every onshore windfarm scheme in Wales apart from single turbine schemes. Their policy is to oppose virtually all schemes that are not small scale, as confirmed by their Director in cross-examination. However their policy witness could not point in cross-examination to any significant progress on other renewables. CPRW attempts either to challenge or reinterpret government policy and the clear statements in the Energy White Paper which retain the immediate 2010 target, and keep onshore wind with offshore wind and biomass as one of the three key elements even in 2020 [CD 20 - page 55]. PPW [CD2.1 - 12.8] strong support for wind energy development is relevant, rather than any reinterpretation CPRW might wish to put on it.

### *Conclusions*

- 9.57 Any windfarm will have an impact on its surrounding landscape, but the area from which this proposal would be visible is remarkably constrained. That area is not of high landscape quality and the proposal is not within any internationally or nationally designated area [CD2.1 - 12.8.10]. It has no direct effect on the historic environment and the environmental effects would be minimised. Although the grid connection was not part of the application, as the appellant would not be constructing it, sufficient funds would be provided to enable the off-site connection to be constructed underground.
- 9.58 A balance must be struck between the demands of countryside protection and renewable energy development. Visual effects are not enough since there are no sites where it could be argued there would be none. Where development has been allowed there have been visual effects that are not reduced by screening or landform to an insignificant level. Many areas of Wales cannot contribute to the renewables target because of national (National Parks, AONB, Heritage Coasts) and local designations. Weight should be attached to the reversibility of the development. At the end of its life it would be decommissioned and removed, unlike other forms of electricity generation.
- 9.59 The evidence demonstrates that the effects on the landscape, including Llandefalle Common SLA adjoining and the more distant National Park, do not fundamentally conflict with the aims and objectives of the development plan policies. Even without that conclusion, it is submitted that the benefits of achieving electricity from the renewable resource available here outweigh the claims of adverse effects. Current Government targets reinforce the importance of the balancing exercise and Ministers have made clear that onshore wind has a key role to play in meeting those targets. The proposal accords with the policies of the National Assembly, which are in line with the UK Government's approach to renewables and wind energy in particular.

## **10. The Case for Powys County Council**

### *The main points were:*

- 10.1 The appellant argues that windfarms differ from other applications; they do not. They are to be judged by the tests of law and policy and determined in accordance with the development plan unless material considerations indicate otherwise. The existence of a willing landowner [APP.DS/2 – 10.7] is not a material planning consideration. It does not relate to the development and use of land.



### *Alternative Sites*

10.2 The site search process, as admitted by Mr Stewart in cross-examination, did not amount to a consideration of alternative sites for the purposes of the EIA Regulations [CD1.1]. Had it been intended to do so it failed to describe the sites and their reasons for rejection as required by Schedule 4. It is accepted that there is no requirement to consider alternatives, but where it has been genuinely done it can make an application more robust [CD2.6 – para 83]. Equally, the Appellant cannot claim in support of the site that he has had to examine a number of commercially unsuitable sites before finding one suitable. The question of alternative sites is relevant if the site is considered unacceptable on its merits, since it would then be necessary to consider whether there is an over-riding need to develop this site in the national interest [APP4/10 – para 29]. In the absence of any rigorous examination of alternative sites in the vicinity to demonstrate that there are none with lesser environmental disadvantages it cannot be contended that there is an over-riding need to develop this site.

### *Other Appeal Decisions*

10.3 The appellant argues that the distance from National Parks of other wind farms allowed on appeal indicates a trend. These trends are set by policy, but policy making is not for Inspectors<sup>12</sup>. Nor are appeal decisions binding on future decision makers<sup>13</sup>. Without detailed knowledge of the circumstances of these other appeal decisions one cannot know whether the facts were so essentially similar as to make the decision a material consideration. It is submitted that save where the previous appeal decision relates to essentially similar development on the same site they are irrelevant<sup>14</sup>. Consistency is desirable but the Inspectors in those other appeals were not making a determination in respect of this site. The Courts have considered when previous appeal decisions may be relevant. In the *North Wiltshire*<sup>15</sup> and *Barnet* cases<sup>16</sup> similar development of the same site was being considered following a recent previous decision and those cases were applied in the *Rank* case. No such question of consistency is raised by the appeals cited by the appellant. Reliance should therefore be placed on the policies of the Welsh Assembly Government and the development plan, and an assessment of the site from the evidence and site inspections. Other appeal decisions should be given little weight.

### *Policy Background*

10.4 From previous decisions in Powys the appellant questions the adequacy of local policy to reflect modern government guidance and to permit acceptable wind energy development. Whether the development plan is up to date is relevant when deciding whether to give it full weight. The Council's policies reflect government guidance and it has a record of permissions and functioning installations. More than half the on-shore windfarms in Wales are in the county. It is correct that apart from the three conjoined appeals [APP4.13] only single turbines have achieved permission since local government re-organisation. But there have not been persistent refusals. There have not been applications for greater numbers.

10.5 The appellant argues that the consultation draft PPS22 is material as an indication of the UK Government's latest thinking [APP.DS/2 – page 25]. But new policies still in the formative

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<sup>12</sup> Chelmsford Borough Council v Secretary of State for the Environment and E.R.Alexander Ltd [1985] J.P.L 316.

<sup>13</sup> Rockhold v Secretary of State for the Environment (1986) J.P.L 540

<sup>14</sup> R. (on the application of Rank) v East Cambridgeshire District Council [2003] J.P.L 454

<sup>15</sup> North Wiltshire District Council v Secretary of State for the Environment 91992) 65 P.&C.R. 137 and Barnet London Borough Council v Secretary of State for the Environment (1992) J.P.L 544

<sup>16</sup> Barnet London Borough Council v Secretary of State for the Environment (1992) J.P.L 544

stage cannot yet constitute policy<sup>17</sup>. Whatever the status of this draft policy for England there is no evidence that it will be adopted substantially unchanged or that it will form the basis of Welsh guidance, which has been diverging from England since 1996. It is submitted that PPS22 is not relevant since it is not yet policy in England and will not apply to Wales in any event.

- 10.6 With regard to the international background to renewable energy policy, it is the content rather than the reasons for government policy that are relevant. This is set out in PPW and TAN 8 [CD2.1, 2.2]. The Welsh targets are in the Final Report of the Assembly's Economic Development Committee Final Report, a benchmark of 4 TWhs per year by 2010, to be provided equally by on-shore, off-shore and other renewables [CD15.2]. There is no indication that there will be targets for counties or areas. PPW [CD2.1 - 12.8.9] advises local planning authorities to make positive provision for such development. The substantial contribution that Powys makes to the current Welsh on-shore capacity, 58% of the total, has not been disputed [LPA.JAE/15 – 7.9]. It is reasonable for the County to seek to protect its most sensitive areas and to contribute to the government's targets where such provision is environmentally and socially acceptable [CD2.1 - 12.8.9].
- 10.7 When considering sustainable development proposals PPW advises [CD2.1 – 12.8.9] that the decision maker should consider the effects of the scheme and its associated infrastructure on the local environment. TAN8 [CD2.2 – A44] states that local planning authorities must always weigh the desirability of exploiting a clean, renewable energy resource against the visual impact on the landscape of wind turbines. There is no special threshold for wind energy in PPW or TAN 8. Nowhere does it say that since wind turbines always dominate or are prominent one should ignore that characteristic.
- 10.8 In favour of the development is a modest amount of renewable energy, an unknown financial benefit to one farmer, and part-time employment for 1 person for maintenance. Against the development are the adverse effect on the landscape, local amenity and the historic environment, and the concerns of the third parties.
- 10.9 S.54A of the 1990 Act requires that “where, in making any determination under the planning Acts, regard is to be had to the development plan, the determination shall be made in accordance with the plan unless material considerations indicate otherwise”. The courts have held that

*“The purpose of S.54A and S.70 is to try and obtain some sort of consistency and long term objectives out of the planning process. However, in many cases...each side of the argument will be able to cite different policies in the same or different plans in support of their contentions. In many cases the relevant policies will contain within themselves value judgements upon which reasonable persons may differ. Thus...while agreement might be secured that the proposal would cause harm to the amenities...there might well be room for argument as to whether it was undue within the meaning of policy<sup>18</sup>.”*

#### *National Park*

- 10.10 Failure to properly understand policy renders a decision defective<sup>19</sup>. Government policy that post-dates the plan is a material consideration which may indicate that the determination should be made otherwise. It is therefore necessary to consider whether current government guidance indicates that a different conclusion should be reached.

<sup>17</sup> Pye(J.A.)(Oxford) Estates Ltd v Secretary of State for the Environment and West Oxfordshire District Council [1982] J.P.L. 577

<sup>18</sup> Schiemann L.J, R v Leominster District Council, ex p. Potheary [1997] 3 P.L.R. 91

<sup>19</sup> Grandsden (E.C.) & Co. Ltd v Secretary of State for the Environment [1986] J.P.L 519

- 10.11 Although the LPA did not cite EC20 all the relevant development Plan policies have to be taken into account<sup>20</sup>. The local planning authority considers that the Local Plan policies prevail over the Structure Plan<sup>21</sup> and that the proposal should be tested in accordance with Local Plan Policies B89 and B90. There are areas of conflict between the two plans.
- 10.12 The first reason for refusal is based on Structure Plan Policy EC2, which addresses developments within and immediately adjacent to the National Park. If the policy applies it requires that the development must be appropriate and sensitive to the natural beauty and the special character of the landscape of the Park. The question is whether a proposal some 5 kilometres from the Park boundary can be said to be immediately adjacent to it.
- 10.13 The Structure Plan states that the Explanatory Memorandum (EM) provides the policy background, the explanatory text and the policy justification. [CD3.1 – Introductory Page]. The Council accepts that the EM cannot prevail over the statutory policy, but it may be used as an aid to interpreting the policy<sup>22</sup>. The *Holden* case confirmed that the EM is “*not approved by the Secretary of State, is not part of the development plan, and should not be taken into account for the purposes of S54A.*”<sup>23</sup> The County Planning Authority approved this Structure Plan and in such circumstances the EM will be more likely to provide an accurate explanation of the policies.
- 10.14 It is submitted that ‘immediately adjacent’ cannot mean ‘touching’ otherwise ‘abutting’ would have been used. It must mean near or very near. The Structure Plan guides development within a quarter of Wales and in within such a vast area to resolve the question of what ‘near’ means the EM should be considered. This states [CD3.1 – 4.39] that government advice extends protection to the setting as well as the Park; that remains government policy. It also states that the Park Authority interprets ‘setting’ to mean all those areas visible from within the Park. It is submitted that ‘immediately adjacent’ means within the setting of the Park but not necessarily all that is visible from any part of it.
- 10.15 Turning to the meaning of ‘setting’, Mr Stewart accepted in cross-examination that the inner boundary is the Park boundary. It is submitted that there is no outer boundary. It is simply the environment in which the Park is set. Its extent is only limited by perception. If an area is invisible from the Park, and the Park is invisible from it, then arguably that area cannot be within the visible setting of the Park. But it may be in the aural setting or be perceived as having such a close relationship as to be part of the setting. If a development is capable of having an effect it lies within the setting and the size and impact of what is proposed must be relevant. This is how the Park Authority and County Council have regard to Park purposes. Minor matters, such as house extensions, are not considered likely to have such an effect on the Park as to need consultation. Major applications or proposals clearly visible from the Park trigger consultation. The important issue is not whether development lies in the setting but lying within the setting does it occasion an unacceptable adverse effect. This would have to be decided if there were no Policy EC2 since regard must be had to the purposes of the National Park, including the conservation and enhancement of natural beauty and promotion of opportunities for public understanding and enjoyment of their special qualities.
- 10.16 This proposal is contrary to Structure Plan policy and Policy EC2. If it is decided that the appeal site does not lie immediately adjacent to the National Park the duty to have regard to

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<sup>20</sup> R (on the application of St James Homes Ltd) v Secretary of State for the Environment, Transport and the Regions [2001] EWHC Admin 30

<sup>21</sup> S. 46(10) Town and Country Planning Act 1990

<sup>22</sup> Cooper v Secretary of State for the Environment and Harlow District Council [1996] J.P.L 945

<sup>23</sup> Holden v Secretary of State for the Environment [1994] J.P.L. B1

its purposes applies whether the activities lie within or outside the Park [CD2.1 – PPW 5.3.7]. The landscape and scenic beauty of National Parks must be afforded the highest status of protection from inappropriate development [CD2.1 – 5.3.6].

- 10.17 The appellant's landscape witness implied that some parts, identified as the core area in the Management Plan [CD3.6 – p58, Area 6 – Brecon Beacons and Fforest Fawr], were more worthy of protection than others. But statute and policy protect the whole of the Park and the National Park Authority has objected [LPA.BBNP/2.1]. The Hobhouse Report [LPA.BBNP.2.3, App B] recognised that the boundaries of National Parks should not be regarded as sharp barriers and that there is a need to protect countryside adjoining them from unsuitable development. The wider landscape of Brecknockshire is an important backcloth and from viewpoints within the Park there is no real sense of where the boundary lies [LPA.BBNP/1 – 2.3-5]. Policies PU3 and PU4 of the Brecon Beacons National Park Local Plan [CD3.4] support renewable energy proposals that would not have a significant adverse effect on Park purposes. There are numerous locations from where the proposed turbines would be visible within the Park, particularly from within 5-10 km such as from Pen-y-Crug, an area of urban common owned by the Park Authority and crossed by footpaths and bridleways. From here the turbines would be on the skyline and detrimental to people's enjoyment of this site [LPA.BBNP/1 – 4.1-4]. The Council has identified as examples 7 important viewpoints within the Park, and 2 outside, located at various distances from where the turbines would have a significant adverse visual impact [LPA.JC/1 – 4.47-74]; JC/2 – Figs jc07-16]. One of these is the Twyn-y-Gaer hill fort on Mynydd Iltyd Common, which is featured in interpretation plaques and leaflets available at the National Park Mountain Centre [LPA.JC/1 – 4.50-53; JC/2 – jc09]. The Park relies heavily on visitors and any detrimental impact on visitor numbers would affect the Park's economy. The turbines would be unacceptably intrusive and harmful to the natural beauty and public enjoyment of the National Park.
- 10.18 The appellant's landscape witness accepts the potential importance of views that are a special characteristic of a designated landscape [APP.KH/2 – 97]. She identifies the landscape and natural beauty as one of the special characteristics of the Park. However, she considers only views from and not of the Park from the outside [APP.KH/2 – 98-9]. She acknowledges that there will be a significant change in view from Pen-y-Crug [APP.KH/2 – 164, 197] but is of the opinion that more distant paths and view points will sustain only a slight to moderate change. The Council's landscape witness points out that there are opportunities for people to enjoy the outstanding scenery of the Park from high ground vantage points outside the Park [LPA.JC/1 – 5.2]. When considering the effect on National Park purposes views where the proposal will lie between the viewer and the Park should be taken into account. The turbines would have a visual effect over a large area of countryside. In assessing that effect it must be recognised that the photomontages should not be relied on as they are not an accurate representation of vertical scale [LPA.JC/1 – 4.23]. Comparison of the photographs of Blaen Bowi with the actual size of the turbines demonstrates this [LPA.JC/1 – 4.21; JC/02 – jc05A]. Analysing the impact from the appellant's viewpoints and 9 more chosen by the Council, the appellant's conclusions underestimate the visual impact from a number of locations [LPA.JC/1 – Tables, pages 33-4].
- 10.19 In considering landscape character the ES [CD10.1.2; CD10.1.3 – Fig11] takes 4 extremely extensive areas, with a portion of the Park within each. The appellant's landscape witness adopted the same approach [APP.KH/2 – 58-83]. As she had concluded that the turbines would not have a significant effect on those extensive areas she concluded that views of the turbines from the Park would not compromise the two purposes of the Park [APP.KH/2 – 99]. But a conclusion that the landscape *character* of several extensive areas, which include parts of the Park, would not be significantly affected does not necessarily imply that the

landscape and natural beauty of the Park would be conserved or enhanced. That requires an assessment of the Park alone coupled with an assessment of the impact upon it by the outlying development. It is necessary to consider both the effects on the purposes and under Policy EC2 to consider the ‘special character’ of the park’s landscape. The proposals would significantly harm the character and appearance of land adjoining the National Park and would be a significant detracting feature viewed from the nearby parts [LPA.JC/1 – 5.2-3].

### *Llandefalle Common*

- 10.20 The second ground for refusal was based on Policy EC3. It is not disputed that the application site lies immediately adjacent to Llandefalle Common. The appellant refers to the EM, which states that common land is not strictly a landscape designation [CD3.1 – 4.41]. But Llandefalle Common is an area of common land and the policy applies to it. Development must be appropriate to both its high quality and its special individual character. It is not open to the appellant to argue that the landscape is not high quality since the policy defines it as such.
- 10.21 The policy also clearly envisages that each area will have a ‘special individual character’. The character of any particular SLA will require assessment when judging whether the proposed development is appropriate. Such an exercise is equally required when considering individual commons and the different characteristics of the Wye Valley or the Border Hills. The ‘Wye Valley’ is not a landscape designation but an identifying label, as is ‘All Common Land’. The EM in stating that common land is not strictly a landscape designation is merely explaining that ‘Common’ is a description of rights over land. It also says of the upland commons that they have a very open unspoilt outlook, a special appearance worthy of protection and conservation. And Policy EC7 protects the open nature, accessibility, landscape and nature conservation value of common land.
- 10.22 Whilst the designation of this area was not based on a formal scientific assessment of the landscape, the guidance in PPW [CD2.1 – 5.3.11] relates to future designations. It does not suggest that adopted policy should not apply. The UDP [CD3.5] is in draft but is not on deposit and should be given very little weight, a view endorsed by the appellant [APP.DS/2 – 8.10]. It contains no policy regarding commons but does contain proposals to rely on the LANDMAP assessment to inform supplementary planning guidance [CD3.5.1 – 3.4.5], which is consistent with PPW [CD2.1 - 5.3.13].
- 10.23 LANDMAP [CD38] is intended to provide a consistent Wales-wide approach to landscape assessment. Currently only the visual and sensory layer has undergone quality assurance. The Council has carried out a finer assessment of the affected landscape using LANDMAP [LPA.JC/1 – 3.11-20]. This demonstrates that the appellant’s landscape character assessment methodology is based on areas that are too large, which do not recognise the variety within the identified Landscape Character Areas (LCA) in the ES [CD10.1.2 - 5.3.3; 10.1.3 – Fig11]. LANDMAP identifies 10 Visual and Sensory Aspect Areas (VSA) within the High Undulating Plateau in the ES [LPA/JC.1 – 3.25; JC/2 – jc01]. The LANDMAP assessment also indicates a higher intrinsic landscape value than that given by the appellant. The appellant’s landscape witness gave her High Undulating Plateau a High/medium value and assessed the quality of Llandefalle Common as medium [APP.KH/2 – p19, Table 1; para 103]. But the Council shares CPRW’s view that the Common is of greater value than other parts of the area included in the High Undulating Plateau LCA [CPRW.GS/9 – 2.3.1(B)]. The Hobhouse Report [LPA/JC.11] recognised the intrinsic merit of the landscape of the area north and west of the appeal site [LPA.JC/3.19].
- 10.24 LANDMAP evaluates Llandefalle Common as ‘moderate’, indicating a landscape of ‘local importance’ [LPA.JC/1 – 3.16]. The final evaluation of this landscape character area,

identified by the visual and sensory assessor as moderate, is not yet complete. But the Lord of the Manor gave evidence of the long recorded history of the Common [CPRW.DV/5]. Evidence was given by him, the representative of the Countryside Council for Wales (CCW) [LPA.CCW/1] and other residents [CPRW - MB/3; RW/4; MR/10] of the elements of the cultural layer, such as recreational use, and some elements of its biodiversity.

10.25 In so far as the absence of a scientific assessment prior to designation is material to the status of this SLA there is nothing in the evidence which indicates that it is not of a quality deserving protection from inappropriate and insensitive development. Of the five LANDMAP VSA covering the appeal site and surroundings one, that covering Llandefalle Common, has low capacity to accept change and the other 4 have low-medium capacity [LPA.JC/1 – 3.31-8]. The attractive views in and out of the Common were specifically remarked on by the LANDMAP assessor [LPA.JC/1 – 3.16], endorsing the reference to open and unspoilt outlook in the Structure Plan [CD3.1 – 4.41]. Furthermore, the turbines would have a significant adverse impact on views from the C60, particularly as it emerges from Llaneglwys Wood, on views from the picnic site at the edge of the wood and the tracks accessible to the public near the edge of the wood [LPA.JC/1 – 4.15]. The turbines would thus have a significant adverse visual and landscape impact on both the Twyn-y-Gaer VSA, which contains the appeal site, and on the Llandefalle Common VSA [LPA.JC/1 – 4.7-9; 4.15].

#### *Amenity - Noise*

10.26 The third reason for refusal was based on Policies B89 and 90 of the Local Plan, relating to the effect on the amenity of nearby dwellings, buildings and settlements in terms of noise and visual dominance. Noise is part of an overall effect on amenity, which is diminished when circumstances are rendered less pleasant or advantageous. This may occur even when levels fall within criteria set by any guidance. The appellant's noise expert does not suggest that the wind farm would make life quieter and more pleasant.

10.27 The amenity of a dwelling or settlement is not dependent solely on the level of noise at the property. Noise outside the dwelling and in a settlement must also be taken into account. The regular swishing sound of turbines gives the noise they generate an unnatural, man-made quality that can be intrusive and out of character in rural areas, reducing their sense of tranquility. The appellant's noise witness did not assess the effect on users of the local rights of way. Turbine noise on the closest footpath on Llandefalle Common, 150 metres away, would be 45-49 dB  $L_{Aeq}$ , considerably above the likely background, around +30 dB  $L_{A90}$ . It would be the dominant noise source [LPA.GR/21 – 11].

10.28 The ETSU Report [CD21] is not a suitable method for conducting a noise impact assessment [LPA.GR.25 – sect 3]. It does not consider the question of amenity, as the appellant's noise expert accepted in cross-examination. It confirms [CD21 - page 46] that separation distances of 350-400 metres from residential properties cannot be relied on to give adequate protection to neighbours of wind farms. By proposing that a fixed limit provides a reasonable degree of protection even where the BS4142 [CD30] threshold at which complaints are likely is breached [LPA.GR/21 – 8.12] it pre-empts the decision-maker's judgement. The ETSU report is out of date since it recommends 35 dB  $L_{Aeq}$  as the night time criterion, ignoring recent WHO advice that a noise limit of 30 dB  $L_{Aeq}$  is necessary to prevent sleep disturbance [LPA.GR/6]. It also ignores BS4142, which makes it clear that complaints are likely when noise levels exceed the background by 10 dB or more [CD30 – para 9]. There is no evidence to support the assertion in the ETSU report that the recommended noise limits provide a reasonable degree of protection to wind farm neighbours. The report proposes that 35 dB  $L_{Aeq}$  would allow peaceful enjoyment of a patio or garden but does not explain how the recommended absolute limit of 37-42 dB  $L_{Aeq,10m}$

would offer protection. Further,  $L_{Aeq}$  is a more appropriate noise assessment criterion than  $L_{A90}$  which is used in the ETSU report [LPA.GR/21 – 7.7; MG/3 – 2f].

- 10.29 TAN8 points out [CD2.2 – A30] that using BS4142 to assess wind turbine noise may be inappropriate in some circumstances, but it does not advocate the use of the noise limits in the ETSU report [LPA.GR/21 – 8.6-9]. Even where there is express government guidance addressing the issue of noise from a particular form of development, which the preface to the ETSU Report explicitly states it is not, BS4142 is a useful tool for assessing the effect of noise<sup>24</sup>. Except where both the background noise level falls below 30dB(A) and the rating level below 35 dB(A), BS4142 may be used [LPA.GR/25 – 2.1]. The Council's predictions for a Nordex N60 at a wind speed of  $6\text{ms}^{-1}$  indicate that it would generate sound levels significantly above background levels, estimated from a survey of limited duration and range of wind speeds, by up to 9 dB(A) at Rhos Farm and Y Felin [LPA.GR/21 – sections 5-6; Tables 1 & 2, pages 21-22]. This represents a potential loss of amenity in an area characterised by low background noise.
- 10.30 The appellant's background noise survey in March 2004 lasted only 13 days and is too limited in duration as it does not include the noise-sensitive summer months when people spend more time outdoors and have their windows open more often [LPA.MG/1 – 13]. The method of measuring and analysing background noise has inherent uncertainties due to equipment inaccuracies, short measurement periods, and use of best-fit polynomial curves [LPA.GR/21 – 8.23 & GR/25 – 4.2]. Close examination of the background noise regression analysis produced by the appellant shows the spread of readings around the graph, with a noticeable cluster below the line probably due to the noise floor, the lowest measurement that could be produced by the meter [LPA.GR/24]. Completely different results can be obtained when allowing for these uncertainties in methodology [LPA.GR/25 – Tables 1-6].
- 10.31 Predicted noise levels from the turbines depend on the choice of machine and are also subject to uncertainties due to sound measurements, noise propagation conditions, and variations in wind speed gradients [LPA.GR/25 – 5]. The warranted sound power level of the turbine gives no margin for error. Allowing for the uncertainties in background noise analysis and comparing with predictions for a BONUS 1.3MW turbine, the noise could exceed background levels at Rhos Farm and Y Felin by sufficient to indicate a potential loss of amenity. And at Pencaemelyn there is the risk of a significant impact [LPA.GR/25 – 5.6; Tables 1-6]. There is no assurance that the levels of noise will not exceed those advanced by the appellant. The current ownership of Pencaemelyn, the dwelling most affected by noise, is not material. The property is not part of the application site or under the control of the applicant and could change ownership.
- 10.32 TAN8 advises [CD2.2 – A31] that the best practicable means should be used to suppress wind turbine noise. Current best practice is to use variable speed turbines, which the appellant has not considered [LPA.GR/21 – 9]. Nor has the appellant considered the effect of low frequency noise, which is not dealt with by the ETSU report [LPA.GR/21 – 8.22, 10]. The WHO recognises the problem of low frequency noise [LPA.GR/6 0 - para 4.3] and a report for the Department for Environment, Food and Rural Affairs confirms that noise with a significant low frequency content is more annoying [LPA.GR/12]. The report refers (para 15.5.3) to limits adopted in Denmark of 20 dB(A) in the low frequency bands. The report for the Vale of White Horse District Council [APP.MDH/6] was based on predictions from a tape recording and its conclusions are misleading since it only looked at tones.

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<sup>24</sup> Swindon Borough Council v First Secretary of State and Hanson Quarry Products Ltd [2003] EWHC 670 (Admin)

10.33 The Council concludes that the appellant has not adequately addressed the noise issues, has not taken the tranquillity of the area into account, and has failed to demonstrate that the wind farm would not cause noise nuisance or cause sleep disturbance to residents [LPA.MG/1 & 3].

#### *Amenity – Visual Impact*

10.34 Turning to visual dominance, the appellant's landscape witness stated in cross-examination that the effect could be overwhelming up to a 100 metres and dominant to 500 metres. Prominence was not considered to extend beyond 3 km. The Council's witness stated at the inquiry that turbines have an overwhelming effect at up to 1km, are capable of dominating the landscape and views up to 3km, and are prominent between 3-6 km and potentially greater distances because of movement and colour [LPA.JC/1 – 4.16-21]. They could be clearly visible at distances up to 15 km. Any dwelling, building or settlement from which views may be obtained within 3km is hence within the zone of potential visual dominance [LPA.JC/2 – Fig 06].

10.35 Policies B89 and B90 are not limited to views from certain rooms, windows or gardens. Amenity may be unacceptably affected wherever the effect is experienced. Whilst it may be more unacceptable from a main viewing location, within the dominant zone visibility from any part of the premises is likely to have an unacceptable effect on amenity. More so if in their daily movements the residents of those dwellings and settlements are exposed to further views of the turbines. Even on the appellant's landscape witness' restricted view of dominance those residents using the C60 road would be dominated and overwhelmed by Turbine 1. When considering amenity one cannot divorce a dwelling or settlement from the surrounding environment, which is used by its residents. If the Structure Plan had been relied on EC20(A) would have formed a basis for refusal but the Local Plan deals in more detail with this aspect and, in so far as there is a conflict, the latter prevails.

#### *Highway Issues*

10.36 The fourth ground of refusal was based on Policy B89. The two relevant criteria are No 6, which refers to the Highway Authority's requirements for visibility, access, turning and other highway matters, and No 7, which considers the effect on amenity from congestion, highway safety or general disturbance.

10.37 The local planning authority accepts that when driven by an experienced, competent driver an unladen vehicle of the size required to transport the turbines now proposed can physically pass through Llanddew. The amended proposal relates to a turbine, the component parts of which are capable of being loaded onto a vehicle which can pass through the village if all goes well [CD10.0.5].

10.38 But there is no way of ensuring that the transport contractor who carried out the trial run, prepared the report on the route and gave evidence at the inquiry [APP.DC/4] would get the contract to transport these turbines. He was put forward as the most experienced operator and yet he stated at the inquiry that the approach to the site was tight. The most difficult site in Wales he had accessed was Parc Cynog, Pendine [APP.DC/5]. The route to that site must be compared with this to determine whether it can be used without danger to property, including the wall of a SAM on one side and a residential property on the other [CD8 & 9], without endangering other road users, or occasioning unacceptable delays. Even if all goes well the appellant's transport contractor confirmed at the inquiry that the successful trial run took 52 minutes. If something were to go wrong the delay could be much longer.

10.39 No traffic management plan has been presented. A scheme may be able to overcome the dangers due to the increase of traffic on the C60 whilst concrete deliveries are made. But



this cannot address the increased disturbance to Llanddew residents from extra traffic. It may be limited to certain hours to avoid the beginning and end of the school day, but during the permitted hours the residents of this currently tranquil village will be disturbed. No traffic management scheme can overcome the necessity to turn and reverse along the B4602 to negotiate the turn to Llanddew [CD10.1.2 – 3.5.3, App G; APP.DC/4 – page 14]. The appellant's transport contractor explained at the inquiry that since 1 January 2004 a police escort is not needed to accompany abnormal loads and that this is being done by the private sector. It is questionable whether a less experienced operator would ensure highway safety. If the refusal had been based on Policy EC20, criterion A would have been relevant.

### *Scheduled Ancient Monument*

10.40 The final ground for refusal again relies on Policy B89. Criterion 2 requires that the development shall not have an unacceptably adverse effect on any site of historic importance or interest. SAMs are of national importance. The Council relies on the view of the Cadw witness regarding the impact upon the Twyn-y-Gaer hill fort SAM and its setting. Whilst the appellant strove to demonstrate that there were some close locations from which the monument could be appreciated without the turbines impinging on the view, the only one identified appeared to be from the C60. At that point the noise from Turbine 1 would significantly exceed the background level and be dominant [APP.GR/21 – 11]. Policy EC7 of the Structure Plan addresses unacceptable impact on archaeological sites and their settings and would equally have provided a basis for refusal. The Welsh Assembly Government's objectives with respect to the historic environment are set out in PPW [CD2.1 – 6.1.1]. This stresses the role of archaeological remains in education, leisure and the economy, particularly tourists. That role will evidently be affected if the site can only be appreciated when dominated by the visual presence of the turbines.

### *Conclusions*

10.41 In conclusion it is submitted that:

- the policies of the development plan are demonstrably in accord with current guidance;
- the proposal is contrary to the development plan in force as set out in the reasons for refusal; and
- the appellant has advanced no material considerations indicating that the application should not be determined in accordance with the development plan.

10.42 The development plan policies permit renewable energy development provided that all criteria are complied with; this development does not comply. The balance between the development plan and other material considerations is for the decision maker. Since the plan takes account of the need to address climate change and provide for renewable energy development, these cannot be material considerations indicating the provisions of the plan should not prevail. Those aural and visual impacts that are less than significant will need to be taken into account. They include fleeting glimpses of the turbines and the repeated views throughout the wider landscape, particularly in an area renowned for its scenic beauty. Alone they might not form the basis for a refusal but they are additional adverse effects that weigh against the development. But in carrying out the balancing exercise only the merits of this application at this site should be considered. Appeal decisions on applications of different merits in other locations should not be considered.

## **11. The Case for Cadw**

*The main points were:*

11.1 In only two appeals concerning windfarms have the settings of scheduled ancient monuments been a material issue. One of these was at Margam [CADW.SR/3.4]. The Tir

Mostyn inquiry, Denbighshire, considered the impact of a wind farm on the setting of a Registered Historic Landscape. Only in these two cases has the impact on the historic environment in Wales been an issue at a wind farm inquiry. Cadw is aware of the targets of the Welsh Assembly Government for renewable energy and only objects where it considers the adverse impact of a proposed wind farm would be unacceptable.

- 11.2 Insufficient weight was attached to the potential impact on the historic environment in site selection, preparing the ES, and in the subsequent assessment during the inquiry. It is regrettable that early consultations were not carried out with Cadw and other historic environment specialists to assist with site selection and design.
- 11.3 Direct impact on the historic environment would be confined to the potential for disturbance to archaeological features identified within the site in the ES [CD10.1.2 – Sect 7] and any undiscovered archaeological features revealed and destroyed during construction [CADW.SR/2 – 6.2, 7.2]. But it is accepted that the protection of the known sites and the investigation of any as yet unknown features could be catered for adequately by condition. Provision for excavation (a watching brief is inadequate) and micrositing, after consultation with Powys County Council, would be necessary.
- 11.4 But the direct effects are negligible compared with the indirect or visual impact. The turbines are massive, solid, modern vertical elements with the unusual characteristic of motion, which TAN 8 [CD2.2 – A48] states should be kept clearly in mind. Consequently, the turbines would be very visible in the landscape, drawing the eye over long distances, and would also be heard when close by.
- 11.5 These six turbines would have an impact on the setting of the Middle Usk Brecon and Llangorse registered landscape of special importance. At 4.8km from the historic landscape the turbines would be seen in the distance [CADW.SR/3.5.1]. But the impact from key points within that landscape, most significantly from Pen y Crug, Twyn-y-Gaer and other Iron Age hill forts, is at least a major/moderate visual effect as accepted in the appellant's landscape witness' proof [APP.KH/2 – 197]. This wind farm would be the first to be sited in this relation to the registered historic landscape.
- 11.6 The well-known Twyn-y-Gaer hill fort dates from the pre-Roman Iron Age [CADW.SR/2 – 2; SR/3.1 & 3.2]. The impact of the turbines on this hill fort ranges from the wider, distant impact, to the immediate and dominating. The defensive settlement enjoys wide views. The three turbines and the monitoring mast some 300-400 metres from the central point of the hillfort, or 275 metres from the outer earthworks of the scheduled area, would have a significant adverse effect upon the setting of the SAM. From the hill fort the turbines would be visually and audibly dominating, particularly in relation to the closer setting to the east and the more distant setting to the north and north east. From surrounding roads, public footpaths and bridleways the turbines would reduce the hill fort's impact in the landscape.
- 11.7 The ES considered only the impact on the archaeology within the boundary of the windfarm. The appellant's landscape witness stated in cross-examination that it was only the setting of the hill fort from public roads and from Pen-y-Crug that was considered. She also conceded that views of the hill fort from the public footpath to the north and west had been underestimated in her proof and that the setting from the hill fort itself was not considered.
- 11.8 The setting of a SAM is nowhere defined, but accessibility is not relevant. Such an approach would deprive the majority of privately owned SAMs, listed buildings and registered parks and gardens of any setting. That is not the intention of PPW or Circular 60/96 [CD2.1 & 2.5]. The current permissive access may well be enhanced by Tir Gofal or

Cadw management agreements and one of the aims of Tir Gofal schemes is to enhance educational access.

- 11.9 It is not credible to suggest that the setting of Twyn-y-Gaer has already been adversely affected by the existence of the adjacent field boundary and road. The surrounding landscape of typically Welsh pastoral agriculture is appropriate for the hill fort, especially compared with the impact of moving turbines, a monitoring mast, site fencing and access tracks [CADW.SR/3.5.2]<sup>25</sup>. Nor has the small trigonometry point materially affected the SAM; it draws the eye to the hill fort. Two small conifer belts would shelter the site from the full impact of one of the turbines, but the blade tips would be visible rotating above the treetops. It is dangerous to rely on conifer belts to reduce impact. One conifer belt shown on the plans has been removed, while others are being replanted with more environmentally acceptable broadleaved trees.
- 11.10 The appellant argues that the immediate view of Twyn-y-Gaer from the road to the east would not be affected, as the turbines would be behind the viewer. However, the impact of the hill fort would have been lost by the time anyone reached that point, since the turbines would dominate the approach along the road and would be exerting a major audible and visual impact.
- 11.11 Insufficient weight was given at all stages to the impact on the historic environment. The position, scale and character of the six turbines would cause a significant adverse impact on the setting of the Twyn-y-Gaer SAM. The three turbines of the southern cluster would dominate views to the east from the hill fort and would reduce the impact of the hill fort in the landscape in near views from all directions. The northern three turbines would affect views from the hill fort to the north and, in combination with the southern group, would reduce its impact within the landscape from many surrounding vantage points.

## 12. The Case for CPRW and BAWT

*The main points were:*

- 12.1 Over the past decade renewables policy in the UK has been dominated by the development of wind power, which has matured technically and financially. It has progressed from a heavily subsidised commodity to one which, though now the cheapest renewable, operates in an artificially guaranteed market supported by a preferential price mechanism, which is nevertheless a form of subsidy.

*Background & Need*

- 12.2 CPRW has several general concerns. First, there is a concentration on the skylines in cherished upland landscapes of increasingly large mechanical constructions. Second, many machines are needed to make a meaningful impact; over 1000 turbines in England and Wales still generate only a tiny fraction of its electricity and in an intermittent and unpredictable manner. Third, there is a concentration on wind power at the expense of other forms of renewable technology, which are becoming economically and technically viable [CPRW.GS/2 – 2.3]. Offshore wind farms are more than technically capable of taking over and have a hugely greater potential, with relatively minor and more easily avoidable adverse effects [CPRW.GS/2 – 2.4]. For this reason CPRW's Offshore Policy is generally welcoming [CPRW.PO/1 – 2.4, App B].

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<sup>25</sup> Locations of photographs taken by Cadw (SRxx) and by the appellant's landscape witness (KHxx) are shown on plan CADW.SR/3.6.

- 12.3 There are real opportunities for achieving the Welsh or UK targets for 2010, as demonstrated by the progress of the North Hoyle and Gwynt-y-Môr projects [CPRW.GS/2 – 2.4.5]. The potential is confirmed by the announcement of the Round 2 Offshore wind farm sites [CPRW.GS/2 – App C] and figures produced by the BWEA [CPRW.GS/2 – Apps D, E]. Consequently, if there are major debits associated with *this project* on the appeal site no weight should be given to the appellant’s argument that there is an over-riding need for this proposal. There is no cogent evidence from Windjen that this is the most suitable site compared with alternatives in Powys, which has already accommodated the majority of wind power schemes in Wales. This site would produce a tiny output with a disproportionate impact in a highly sensitive location. These would be the joint largest turbines in Wales and double the numbers at either Blaen Bowi or Moel Maelogen. Brecon Against Wind Turbines (BAWT), the Ramblers’ Association and the British Horse Society share CPRW’s concerns [CPRW.MB/3; MR/10 & ROLT/12]. The wind farm would have significant adverse effects, but the need for this site is not proven and not compelling; the quality of the affected landscape is of major importance.
- 12.4 BAWT does not want to see its landscapes, livelihoods and amenities sold. It was formed in January 2000 by local people concerned at the unacceptable impact of these proposals on the Brecon area. BAWT is particularly concerned at the impact on the designated landscapes of Llandefalle Common and the National Park, and the impact on tourism.

#### *Llandefalle Common*

- 12.5 Llandefalle Common is of the greatest antiquity and of considerable historical importance. It is valued by the Commoners and those who come here to walk, ride, cycle, bird watch or picnic for its special qualities. There are panoramic views of the length of the northern escarpment of the National Park from Hay Bluff through the Black Mountains, the Central Beacons to the Carmarthen Fans [CPRW.RW/4 & DV/5]. The southern group would intrude into the centre of these views, severely damaging the character and quality of the landscape. And there are extensive views of the lower land, which remains a small-scale Welsh agricultural landscape much as it has been for many years. Both groups of turbines would intrude in views of this lower land [CPRW.DV/5]. The Common is an important, tranquil area of open land, isolated from most noise sources such as roads and settlements and has a sense of remoteness. It also has a perception of wilderness, a concept demonstrated by surveys in the Brecon Beacons National Park [CPRW.RW/4 – 3.1]. Its lack of human activity, vegetation and wildlife evoke this perception, which would be destroyed by these massive, man-made, moving turbines.
- 12.6 The approach of the appellant’s policy witness to Structure Plan Policy EC3 was startling. In response to CPRW he said that the inclusion of Common Land with SLA was flawed, without reasoned justification or supporting evidence. That is an untenable position, as it attempts to pick and choose from this extant key policy and to reject Llandefalle Common. The correct and logical approach is to accept that Llandefalle Common is protected by Policy EC3. The evidence of CPRW and BAWT demonstrates its quality.
- 12.7 The appellant’s landscape witness took up many of CPRW’s criticisms of the landscape analysis in the ES. Her evidence included several of the viewpoints CPRW suggested and up-graded the quality of the *High Undulating Plateau* landscape from ‘Medium’ to CPRW’s suggested ‘Medium/High’. Yet Llandefalle Common, the epitome of that character area, from where the classic views and ‘perception of wilderness’ would be fatally compromised by the turbines, was assessed as of only Medium quality. It is thus devalued to the lowest quality in that landscape, against all the evidence and the considered views of the Open Spaces Society [OIP/3]. It is impossible to class the intricate historical interface between the delicate pattern of in-by enclosure and the broad open sweeps of the textured

bracken, hawthorn and moorland grasses with their seasonal changes, their ponies and the inviting footpaths and bridleways as of merely 'Medium' quality. With the advent of open access following the implementation of the CROW Act [CD1.4], one can only conclude otherwise, especially when considering the many-layered attributes enshrined in its charm.

- 12.8 The greatest impact would be on riding and walking. The government has enacted the CROW Act [CD1.4] in recognition of the fact that access to unspoilt, remote countryside is in the public interest [CPRW.MR/10 – App C]. Llandefalle Common is already well served by public footpaths and will become more accessible as Access Maps under the CROW Act are confirmed [CD4.1]. These turbines would have a highly adverse effect on the enjoyment of the surrounding countryside by walkers and would undermine the local tourist economy [CPRW.MR/10 – App D]. The numerous walkers who visit the area for the views of the Beacons would see the turbines as a serious intrusion. It would intrude on views from other elevated locations popular with walkers such as Pen-y-Crug, a most important short walk from Brecon, and the Twyn-y-Gaer hill fort on Mynydd Illtyd Common. The Ramblers' Association considers the proposal should be refused [CPRW.ROLT/12].

### *Impact on Tourism*

- 12.9 Llandefalle Common is important for local riders and those riding longer distances for example on organised trips. The route of one of these crosses the Common to the north of the turbines [CPRW.DV/5.1]<sup>26</sup>. The turbines would reduce the attractiveness of the Common and the views from it, dissuading people from coming here, particularly tourists. The tourism trade is important to the economy of the area and many farmers provide bed and breakfast accommodation. Many visitors have said they would not return to the area if the turbines were erected [CPRW.GD/7]. Research in Scotland and Denmark has confirmed the negative effect of windfarms on tourism [CPRW.ED/6 - 5]. A recent survey for the Wales Tourist Board [LPA.JAE/13 – page 102] found that 79% of visitors agreed that windfarms should be prohibited in offshore areas adjoining areas of high landscape value (including National Parks)<sup>27</sup>. Also, 22% would avoid an area of countryside if they knew windfarms were there. The majority of tourist businesses in Aberystwyth opposed further windfarm developments in Mid-Wales [CPRW.ED/6 - 6]. BAWT's survey in March 2004 at the Storey Arms and the Libanus Mountain Centre supports the WTB's survey results and indicates that visitors to the National Park have a strong dislike for wind turbines in the local setting [CPRW.LS/8 – 4, App A]. Visitors will not return to this area if they feel it has been blemished by the erection of these turbines; they would be a disaster for local tourism. Research has shown that visitors are more sensitive to the impact of windfarms than local residents [CPRW.LS/8 – 3.7].

### *National Park*

- 12.10 Analysis of the impact of the turbines on the National Park for BAWT using aerial photography and computer modelling shows the full effect [CPRW.LS/8 – 3; CD-ROM]. The turbines would be highly visible within 6km [CPRW.LS/8 – Figs 2-4]<sup>28</sup>. Views from dwellings and villages towards the National Park would be heavily affected, as would views from within the Park. The lack of other vertical structures of similar size and shape would compound the impact. The results of independent research [CPRW.LS/8 – Apps B & C] have been used to predict the probabilities of detecting and recognising turbines at various

<sup>26</sup> Although the route is not shown on the 'Free Reign' brochure, it was confirmed at the inquiry that the route uses bridleways 23, 11 and 15 [CD4].

<sup>27</sup> This survey result is incorrectly quoted in the proof of Mrs Daniel [CPRW.ED/6] but is given correctly in the proof of Dr Skinner [CPRW.LS/8]; the correct version is given here.

<sup>28</sup> In cross-examination Dr Skinner confirmed that the turbines are not shown to scale in these figures.

distances [CPRW.LS/8 – 3.4.2]. The results show high recognition rates from Pen-y-Crug in the National Park of 80-90% on overcast days and 70-80% on clear days [CPRW.LS/8 – 3.6, Figs 6 & 7]. Recognition rates of 40-50% would be likely at the base of the Beacons and Black Mountains, reducing to 20-30% on the peaks such as Pen-y-Fan. The analysis shows that there would be a significant impact on views of and from the National Park.

- 12.11 The concept of ‘significance’ has a precise meaning within the terms of the Environmental Impact Assessment Regulations. Upon that most of the receptor issues turn, certainly those covered by CPRW and its partners. The question of the sensitivity of receptors needs emphasising, as does that of how significance is measured, and how nearly significant individual effects are incorporated into the final balancing exercise. The modern method used in the appellant’s landscape assessment [CD7] is difficult to appraise as it relies at critical points on ‘professional judgement’. A significance matrix with a detailed and systematic indication of receptor sensitivity and landscape quality is clear and understandable.
- 12.12 The Sinclair-Thomas Matrix [CPRW.GS/9 – 2.1] is a helpful tool to establish indicative parameters for likely visual effect. The ES consistently underestimates the visual effect of the proposal due to a failure to appreciate the sensitivity, popularity and landscape importance of the Brecon Beacons and Black Mountains. Six additional viewpoints were chosen by CPRW and assessed with those in the ES [CD10.1.2]. Three viewpoints show visual effects of independent significance compared with 1 in the ES, and 10 show effects of contributory significance compared with 5 in the ES. CPRW’s conclusions demonstrate that the level and extent of significant and near-significant effects is substantially greater than that suggested by the appellant [CPRW.GS/9 – 2.9-10]. The Inspector’s visit to the Blaen Bowi windfarm will confirm the drawbacks of photography, wireframes and photomontages [CPRW.GS/9 – 2.5-6]. These do not give a true representation and shorten the apparent height of the turbines and are no substitute for the human eye. The point has been accepted in other appeals and by other Inspectors [CPRW.GS/9 – App D; GS/9.0A].
- 12.13 Views to and from the National Park are important. Views from the scarp summits, from the foothills and from all points in between would be adversely affected. There would be views of turbines against land from high ground, while views from the many important locations on lower land would place turbines on the horizon, as shown by the Council’s landscape witness [LPA.JC/2 – jc07-16]. The appellant’s landscape witness argues that no matter how important the view from certain locations, because of the size and variety of the National Park the effect on the Park as a whole must be insignificant and unimportant. This argument must be rejected.

#### *Amenity - Visual Impact*

- 12.14 The appellant’s landscape witness has analysed the residential impacts with ZVIs combining individual appraisals and wireframes for the affected properties [APP.KH/4 – App 7]. She does not have the local knowledge of those living in the area and cannot assess the effect in their gardens and houses, where ‘receptors’, that is people, would see the turbines. Even the slow sweep of a turbine blade across the sky in a view can be an abomination and the extent of stacking and overlap effects has been under-estimated, as shown by the wireframe diagrams [APP.KH/4 – App 7, B2]. People here spend less time in their gardens since they have the adjacent countryside to wander or to work in.

#### *Conclusions*

- 12.15 The inherent conflict between policies for renewable energy and those protecting the countryside and the nearby National Park is endangering the qualities of one of Wales’ prized natural assets. The Countryside Agency in its submissions to the House of

Commons Environmental Audit Committee in January 2001 expressed profound dismay that the quest for locating just one project in a whole portfolio of sustainable energy technologies had led interested parties into a destructive, expensive and confrontational foray.

*“We must not risk losing the huge challenge for renewable energy development in the longer term by driving through insensitive development to meet the 2010 target”.*

12.16 This is a very difficult site. It offends both local residents and landscapes of local and national importance. The level of significant and adverse effects is markedly greater than claimed by the appellant. The assertion in the ES that the conceded significant effects are ‘acceptable’ should be disregarded. There is every possibility that the Assembly’s wind targets will be exceeded with the help of offshore sites, in less sensitive areas and by other forms of renewable energy. This is not in itself a reason to dismiss the appeal but, in combination with the clear harm it would create, the flawed context and marginal benefits are important for the balance to be struck. No considerations justify allowing this project.

### 13. The Case for Other Interested Persons

13.1 Mrs Anne Nicholls, the South Powys Bridleways Officer for the **British Horse Society** (BHS), said that considerable efforts were being made to promote long distance bridleway routes such as the Three Rivers Ride that connects the Black Mountains with the Epynt Way. The section from the Epynt Mountains came through Llethercynon Farm and uses bridleway 11, some 300 metres north of proposed Turbine 5. Turbine 4 would be 75 metres from the road, which was used by horse riders. The BHS recommended that turbines were sited a minimum of 200 metres or 3 times the height of the turbine from a route used by horse riders. In this case that would imply a separation of 228 metres from the nearest route. Horses were sensitive to sudden noise and movement and a fearful rider could cause a horse to be nervous. Horse riders would be of mixed ability and children ride on bridleways. There was the added danger of blade shear and ice forming on blades in winter. The moving shadow of the blade on the ground could cause a horse to react. The CROW Act would cause more people to discover this area.

13.2 **Mr Gareth Davies of Cwm Gwilym Farm** said that his farm adjoined the site of the proposed wind turbines and Llandefalle Common [OIP.2]. He now lives in a new farmhouse built since the application was submitted and this may not have had a noise assessment. He was concerned that his family would be affected by noise and if the number of turbines increased in the future there could be an increase in noise. He would see 3 turbines from the farmhouse, which was 600 metres from the nearest one. The land where the turbines would be built was some 60 metres above the farmhouse so that the relative height of the 76 metre turbines to the tip of the blades would be 130 metres. He and neighbouring farmers had entered into the Tir Gofal scheme, aimed at enhancing and protecting the beauty and natural habitat of the Welsh countryside and the farms are now Special Areas of Conservation. This development would not enhance the beauty of the area. The lives of himself, his family and the local community would be severely affected.

13.3 **Mrs Jean Jones of Siop Fach** said that her son Courtney who is physically disabled lives in a flat specially adapted to his needs attached to her house. One of his problems is flickering light and he could be affected by fluorescent lighting. He is an intelligent and pleasant person who enjoys riding on Llandefalle Common and enjoys television. The turbines would affect the television reception. He crosses the Common twice a day or more and the turbines would be in full view. At the moment he has a good quality of life but he would be imprisoned in his home if the turbines were erected. In response to my question regarding the likely effect on her son, Mrs Jones said that she had taken her son around

other turbines and he had reacted badly to the flickering and the noise. In her view he would not be able to live in sight or sound of the turbines.

- 13.4 **Mrs Jane Chappelle of Pentwyn Farm, Garthbreny** said that she and her children, who love nature, had spent many happy hours on Llandefalle Common. Skylarks could still be heard there. The lorries used to construct the turbines would have a serious impact even though for a short period. The turbines would kill many birds and an article in the 27 May 2004 issue of ‘Shooting Times and Country’ magazine [OIP/4] confirmed this.

#### 14. Written Representations

- 14.1 The 85 letters of representation received in connection with the appeal prior to the inquiry are in CD12.2.1-85. One letter [CD12.2.4] confirms the withdrawal of a previous letter of objection and states that as North Sea oil dries up it is more essential to seek alternative power. Another letter [CD12.2.46] supports the development on the grounds that a person should be allowed to develop if he wishes and that if there were no electricity people would complain that the windfarm had not been erected. A further letter from the Brecon Town Council [CD12.2.53] requested a copy of the appeal decision. The Town Council objected at application stage [CD10.6.3].

- 14.2 The main points raised in the 82 letters of objection are:

- problems of transporting turbines through Llanddew and impact on village residents
- danger on the local highway network and objections from the Police
- no benefit to the local community
- dominating visual impact on neighbouring properties
- impact on the National Park, including views of the Park
- impact on views from Pen-y-crug
- conflict with the statutory purposes of the National Park<sup>29</sup>
- impact on Llandefalle Common, particularly on the panoramic views from it
- impact on an area popular with walkers
- effect on the Brecon area and town
- loss of a tranquil area
- impact on the landscape
- the ‘borrow pits’ would be quarries that would be a blot on the landscape
- impact on the tourism industry
- lack of information on connection to the National Grid; pylons would be an eyesore
- light flicker and the impact on someone suffering from photo-sensitive epilepsy
- impact of noise in an area of very low background noise, particularly on residents
- effect on television reception
- the energy is needed in the industrialised S-E of England
- the energy produced would be small and not lead to the closure of a single power station
- effect on setting of a SAM
- effect on the amenities of nearby properties and settlements

<sup>29</sup> Council for National Parks – CD12.2.73



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- a precedent would be set with the risk of additional turbines in the future
  - wind power is uneconomic and there are better alternatives
  - environmental impact outweighs the limited benefits
  - distraction to drivers
  - impact on birds, particularly the Red Kite
  - effect on flora and fauna
  - a short term solution and waste of public resources
  - loss of property value
  - destruction of hedgerows
  - danger to horse riders
  - impact on water run-off from the surrounding land and the water table.

14.3 Two written objections were handed in during the inquiry. **Mrs Sian Gregory of Ty Canol** [OIP.1] objects on grounds of the impact on birds that breed in the area, including the very rare nightjar, which nests in the forest visible from Llandefalle Common. Also the mountain pansy, now extremely rare, flowers nearby. The Red Kite is the logo of Powys. It would be sad if this bird were to suffer as a result of the search for green energy. The **Open Spaces Society** [OIP.3] states that the turbines would affect the amenity value of Llandefalle Common and infringe on the rights of Commoners and those who use the land. They would destroy the unique character and quality of the landscape. The Society opposes wind turbines close to land subject to a public right of access or land that will become so under the CROW Act.

14.4 The representations received by the Council in relation to the original application are in CD10.6-8, with a petition of opposition at CD10.10. A summary of the representations in support of and opposed to the application are in Section 4.11 of the committee report [CD11].

## 15. Conditions

15.1 A set of conditions with changes agreed at the inquiry is contained in CD45. I set out below for each numbered condition on that list the points of disagreement and where necessary for explanation the comments that led to the changes shown:

- No 3: CPRW pointed out that where time limited permissions were given they normally ran from the date of the permission. The appellant argued that the application sought a 25 year use of the site for wind energy development. The Council referred to the Darracott appeal decision [APP/4.24 – condition 13].
- No 4: the appellant did not wish to be limited to the initial constraint to site turbines within 20 metres of the grid reference but proposed that any micrositing would be with the agreement of the Council. The Council accepted this, pointing out that their concern was for archaeology, rights of way and the impact of noise. CPRW proposed that the transformer building should be included in the condition and this was agreed.
- No 11: the Council requested the addition at the end of “when viewed from the front of the nacelle” and the appellant did not object, confirming that no turbine would go in both directions.
- No 14(p): the appellant pointed out that this did not relate to the appeal site and that the parts to be transported to the site would be within the existing height restrictions set by

the Highway Authority. In reply to a question from CPRW the Council confirmed that there are no trees protected by a TPO affected by the access route.

- No 14(q): CPRW requested that this is extended to cover decommissioning, but the appellant pointed out that condition 3 covered this matter.
- No 14(s): the appellant accepted that since the ES had identified the potential for badger use of the site [CD10.1.2 – 6.7.2], it was logical to carry out a further survey as added protection. CPRW requested that this condition included “other notifiable species”. The appellant resisted this and pointed out that the ES had only identified the possibility of badger use and there was no significant risk of new species being found on this open grassland site. The Council confirmed that their specific concern was effect on badgers.
- No 14(t): the appellant argued that this was unnecessary and that a full survey could delay development of the site for up to 1 year because of the need for survey work in certain seasons. The Council argued that the ES had been done a long time ago, but reluctantly accepted that this condition could be deleted provided No 15 was retained, as the impact on birds was the Council’s main concern
- No 16: the appellant objected to the initial version, which gave the archaeologist the power to stop work; this was not a SAM and the archaeologist should not be running the project. The appellant proposed an alternative version [16(b)], which provided that the areas where topsoil is to be stripped would be left for 7 working days to allow for archaeological inspection. The Council and Cadw requested that this requirement should include the access tracks, cable routes and any other structure where topsoil was to be stripped [16(a)]. The appellant objected as the condition only needed to include those areas where excavation would go below topsoil level.
- Nos 17-19: the Council maintained that the conditions should specify the noise limits in  $L_{Aeq}$  rather than  $L_{A90}$  because the 2dB difference between the two measurements quoted in ETSU-R-97 [CD21] is only an assumption. The 32dB limit was proposed in No 17 since that was the figure the appellant’s noise witness said could be achieved. The appellant pointed out that  $L_{A90}$  was used in the ETSU guidance and in a number of appeal decisions [APP/4.2, 4.18, 4.21, 4.23 and 4.24 – condition 20], none of which used  $L_{Aeq}$ . The limit should be 35dB, which was the absolute floor level used in the ETSU guidance. If  $L_{Aeq}$  was used then 2dB would need to be added to the noise limits in conditions 17-19. The Council pointed out that previous decisions were not binding. The relevant policies in this case required minimisation and since the appellant could achieve the levels stated in the conditions they should be retained.
- No 21: the appellant requested that “reasonable” was inserted before “request” since the Council could require monthly monitoring on the basis of the condition as written. The Council argued that this was imprecise and it had to be assumed that the Council would act reasonably.
- No 22: it was agreed that the limit between 1900-2300 should be 57 dB  $L_{Aeq, 1hr}$
- Nos 24-28: in response to my questions about the need for this level of detail, the appellant stated that this was preferred as it gave a greater level of certainty.
- No 33: it was agreed that the original conditions 33 and 34 should be combined.
- No 35: the Council required this to avoid any disruption on the roads leading to the site and particularly through Llanddew at the beginning and end of the school day.

- No 37: the Council was concerned that the cable runs might affect this area. The appellant confirmed that no work was planned in this area but there was no objection to the condition.

15.2 Cadw requested that the developer consider their proposed condition 3 as a contribution to public benefit [CADW.SR/2 – page 9].

## 16. Conclusions

[References in the footnotes are to the previous paragraphs of this report]

- 16.1 I consider first the question of alternative sites, since the Council and CPRW criticised the approach taken to this in the ES<sup>30</sup>. Circular 11/99 confirms in paragraph 83 that neither the European Directive on environmental impact assessment nor the Regulations expressly require the developer to study alternatives. The appellant's witness confirmed that Section 2.4 of the ES [CD10.1.2] did not amount to a consideration of alternatives for the purposes of the Regulations. It is their case that this is not needed as the proposal is acceptable and that any adverse effect is outweighed by the benefit of using renewable resources<sup>31</sup>.
- 16.2 The acceptability of the proposal on this site I deal with in the rest of this report. In terms of the assessment of alternatives in the ES<sup>32</sup>, the selection of this site did take account of environmental factors, since part of the process was based on a constraints map showing wildlife and landscape designations produced by the study 'Wind Energy Resources in Powys'. Whether that process satisfied the requirements of the Regulations is not material since they do not require alternatives to be considered. Nor does the appellant argue that this is the site that would cause the least environmental harm. That would be an enormous and arguably impossible task in view of the nature of the development, the range of alternative sites and the imponderable question of how to define the search area. The Regulations define an ES as one that includes such of the information referred to in Part 1 of Schedule 4 (which refers to alternatives) as is *reasonably* required to assess the environmental effects and which the developer can *reasonably* be required to compile (my emphasis). Whilst Windjen and other companies are engaged in seeking out a number of sites for the development of wind power, these are not alternatives but are all intended to contribute to the Assembly's and UK Government's targets for renewable energy production. I am satisfied that the information in the ES together with the additional environmental information produced during the appeal process and public inquiry is sufficient to judge the environmental effects of the development.

### **Main Issues**

- 16.3 During the PIM I defined 6 issues that in my view encapsulated the main areas of dispute raised by the Council and other parties [CD22]. Nothing was raised at the inquiry to fundamentally alter those issues, subject to the inclusion of the effect on landscapes of historic interest in the issue dealing with the effect on the Twyn-y-gaer SAM. Reordered to reflect the way the cases developed at the inquiry the issues are as follows:
- the effect of the proposals upon the surrounding landscape, including the Brecon Beacons National Park and the Llandefalle Common SLA, and its enjoyment by the public.
  - the effect upon the living conditions of neighbouring residents, with particular reference to noise and visual impact.
  - the effect upon the setting of the Twyn-y-Gaer hill fort SAM and the Middle Usk, Brecon and Llangorse Landscape of Special Historic Interest.
  - the effect upon the local economy, with particular reference to tourism.
  - the effect upon highway safety, in particular the suitability of the roads leading to the site to deal with the volume and nature of the vehicles during construction.

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<sup>30</sup> 9.48, 10.2, 12.3

<sup>31</sup> 9.58-9

<sup>32</sup> 1.5

- whether the need for and benefits of the proposal outweigh any harm that may be identified in terms of the previous issues.

### ***Landscape Impact***

- 16.4 I begin with a discussion of my visit to Blaen Bowi<sup>33</sup> and the criticisms of the Council and CPRW of the value of the photomontages<sup>34</sup>. The first point to make is that the appellant's landscape witness emphasised the need for care when using a photomontage, particularly holding it at the correct viewing distance. She also agreed in answer to my question that the photomontages and wire frame diagrams are a tool to assist in assessing the visual impact and that the site inspection is crucially important. I also accept that the photomontages of the proposed turbines were produced in accordance with accepted advice<sup>35</sup>.
- 16.5 Nonetheless, my visit to Blaen Bowi, where I was able to compare the reality with the Council's photographs of the existing turbines<sup>36</sup>, demonstrated convincingly the difficulty of judging their visual impact from photographs. CPRW has referred to studies that have come to similar conclusions<sup>37</sup>. The photomontages prepared for the Blaen Bowi ES were submitted after I had visited this site, but they confirm my conclusion following my visit. In reality the Blaen Bowi turbines appear larger in the landscape, particularly in height, than would appear from the photographs and there is no reason to believe that a photomontage would give a different impression. This may be due to the difficulty of judging scale from a photograph so tiny in comparison with the object it represents. It is hard to obtain a true impression because everything in the photograph is reduced to the same relative small size. But when viewing the actual turbines the human brain does not need to make any adjustment for scale. The photomontages of the wind farm proposed in this appeal are therefore an important tool, but on their own these do not give an adequate impression of the scale of the proposed turbines in the landscape and can only be part of the assessment process. This is not to decry the use of these photomontages to illustrate the visual impact of the proposed turbines, but to sound a cautionary note about making judgements on the basis of these alone.
- 16.6 My visit to Blaen Bowi also enabled me to compare my conclusions on visual impact with those of the appellant's and Council's landscape witness<sup>38</sup>. At the time of my visit, early evening, it was fine and sunny and visibility was good. My conclusions from that visit are as follows, using the same descriptions 'overwhelming' and 'dominating' used in the evidence and from the same viewpoints as in the photographs submitted by the Council:
- Viewpoint 9 – at 15km; turbines visible but very much a small part of the wider landscape;
  - Viewpoint 8 – at 10km; turbines prominent in the landscape because of skyline position, but not dominant; a relatively small element of the expanse of landscape; movement barely detectable;
  - Viewpoint 6 – at 6.2km; turbines prominent in the landscape but not dominant; a relatively small element of the expanse of landscape;
  - Viewpoints 4 & 5 – at 4.6km; turbines prominent features in the landscape but not dominant;

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<sup>33</sup> 4.2

<sup>34</sup> 10.18, 12.12

<sup>35</sup> 9.13

<sup>36</sup> 10.18

<sup>37</sup> 12.12

<sup>38</sup> 10.34

- Viewpoint 3 – at 1.97km the turbines are verging on dominating in their impact;
- Viewpoint 2 – at 0.7km the turbines dominate the surrounding landscape but are not overwhelming;
- Viewpoint 1 – at 100 metres the turbines are overwhelming.

16.7 These are necessarily subjective judgements based on my visit. I have described the turbines as ‘prominent’ when they are easily seen and identified without the need for close examination of the landscape or having to refer to a map or photomontage to identify where to look. Turbines are ‘dominant’ in my opinion if they are not just visible but draw the eye to the extent that little else is seen, even in an attractive landscape. I describe a turbine 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 further away. On this basis and from my observations I reject the Council’s claim that the proposed turbines would be overwhelming up to 1km and would concur broadly with the appellant’s view that this would extend to 100 metres. But I also disagree with the appellant’s assertion that the turbines would only be dominant up to 500 metres. This is very much a function of size but in my view turbines such as those proposed in this appeal would be capable of dominating the landscape up to a distance of 2km and could be prominent at distances up to and beyond 6km. But although they may be prominent in the sense of being clearly seen, this does not necessarily imply that they cause unacceptable harm.

16.8 I now use these conclusions in my assessment of the landscape impact of the turbines. I have dealt first with the impact on the National Park, second on Llandefalle Common and its immediate surroundings, and third with the impact from other locations.

#### *National Park*

16.9 Dealing first with Policy EC2 of the Powys Structure Plan, the meaning of ‘immediately adjacent to’ is disputed<sup>39</sup>. I accept that the Structure Plan EM may be useful in guiding the interpretation of policies but paragraph 4.39 only states what ‘setting’ means to the National Park Authority; it does not interpret ‘immediately adjacent to’ for the purposes of Policy EC2. In their normal sense the words ‘immediately adjacent’ convey to me the meaning that something is very close, whereas ‘setting’ implies a wider area. Whatever the intention of Policy EC2 I do not consider that ‘immediately adjacent’ can be interpreted as extending many kilometres from the boundary of the Park. Certainly it cannot be interpreted as extending to all the land visible from the Park, as suggested in paragraph 4.39 of the EM. As written this policy extends to a limited area, the extent of which remains undefined, but to my mind is less extensive than the Park’s setting. In this context I accept to an extent the Council’s argument that setting depends on scale<sup>40</sup>. But this also reveals the fallacy of trying to define its extent, since the concept of ‘setting’ is devised in order to protect the Park, not by reference to distance. The issue is therefore not how far the setting extends but would the proposals have an effect on the National Park. This reflects the simple advice in paragraph 5.3.7 of PPW<sup>41</sup> that the duty to have regard to National Park purposes applies to activities affecting those areas, whether they are inside them or not. Be that as it may, the first of the National Park purposes includes conserving and enhancing natural beauty, which is effectively the same test as set by Policy EC2. Provided there is no effect in terms of the twin purposes of the Park, the requirements of Policy EC2 would therefore also be met, irrespective of any argument regarding its applicability.

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<sup>39</sup> 7.2, 9.3, 10.12-14

<sup>40</sup> 10.15

<sup>41</sup> 7.5

- 16.10 Turning then to those purposes, from the more distant viewpoints, such as Pen-y-Fan, Hay Bluff and the Black Mountains, the turbines would be clearly visible in reasonable viewing conditions<sup>42</sup>. From many positions they would be seen on the skyline and their movement would draw attention. Their colour would be particularly noticeable against darker backgrounds. But at such distances, 14.4 km in the case of Pen-y-Fan, the turbines would be a small and insignificant part of a panoramic landscape vista. In particular from Pen-y-Fan, which I visited, the turbines would be seen in the context of the town of Brecon, which exerts an urban influence on the landscape. The turbines would be seen in this context from the peak, rather than in relation to the wild, unspoilt landscape that extends south of Pen-y-Fan. There are people who would find the sight of turbines even at this distance objectionable, but there would be such a slight effect on the landscape as a whole that the natural beauty of the Park and its public enjoyment would not be materially affected.
- 16.11 But the Park extends much closer to the proposed turbines. One of the most important nearer views is from the Twyn-y-Gaer hill fort on Mynydd Illtyd Common, around 10 km from the nearest turbine<sup>43</sup>. It is an important viewpoint both of the core escarpment of the Park extending to the south and east, but perhaps more importantly of the lower rolling agricultural land rising to the north, to the higher land containing the appeal site, and Mynydd Epynt further north. It is an area to which walkers are directed by National Park literature. From this location the boundary of the Park is not evident in terms of physical features or change in the character of the landscape<sup>44</sup>. I observed during my visit that there are stones that act as a natural seating area on the north side of the hillfort near the trigonometry point, where there is evidence that people sit regularly to enjoy the panoramic northerly views. The appeal site would be in a focal point in those views. Nonetheless, from my visit to this site and my observations of the Blaen Bowi turbines I do not consider that the turbines would be dominant features of the landscape, but would form only a small part of it. This is due in no small part to the fact that the turbines would be in 2 small, separate and relatively contained groups, which would limit their impact on the landscape.
- 16.12 The viewpoint of greatest concern to the objectors is the Pen-y-Crug hill fort and common, the closest viewpoint to the appeal site within the Park, around 5.5 km away, and a popular area with walkers<sup>45</sup>. From here 5 turbines would be on the skyline and highly noticeable because of their location and movement; the sixth would stand out against the dark backdrop of Llaneglwys Wood. But again, although the turbines would be prominent, they would remain a relatively small element of the wider landscape and in the context of the scale of the landscape vista their impact would be limited.
- 16.13 The Council suggested that views of the Park from surrounding higher ground are relevant to Park purposes if the turbines intrude<sup>46</sup>. The effect on views from Llandefalle Common raises different issues, which I deal with below. I do not consider the effect on views of the Park has any direct bearing on the purposes of its designation. Bearing in mind the area over which the central mountain ranges such as the Black Mountains and Brecon Beacons are visible this would have considerable implications for all development proposals. It is the purposes of the National Park that are at issue and these would not be affected by changes in views of the Park from land outside its boundaries. The purposes apply to land within the Park. Its natural beauty and special qualities are features of the land within it rather than of views from outside.

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<sup>42</sup> 3.2, 9.11, 9.15, 10.17, 12.10

<sup>43</sup> 10.17

<sup>44</sup> 10.17

<sup>45</sup> 9.15, 10.18, 12.8, 14.2

<sup>46</sup> 10.18

16.14 There are many locations within the Park from where the turbines would be seen, but the sample of views referred to above is representative and includes the most important viewpoints referred to in the cases. My overall conclusion is that the turbines would be at such a distance from most viewpoints within the Park that they would be small and insignificant in relation to the scale of the landscape and so their impact would not be material. Arranging the turbines into 2 small, contained groups would help to minimise the landscape impact<sup>47</sup>. From the limited number of closer viewpoints the turbines would be prominent but their effect would remain limited in the context of the scale of the visible landscape vistas and so would not affect the natural beauty of the Park or its appreciation and enjoyment by the public. The mere fact that the turbines would be visible from the Park and prominent in some views would be unacceptable to some people, but I do not consider this implies that the purposes of the Park would be compromised. The turbines would not detract from public enjoyment of the special qualities identified in the Park Management Plan<sup>48</sup>, particularly its landscape and natural beauty as already dealt with, its peace and tranquillity, opportunities to walk in its open countryside, its open spaces and its remoteness. The separation between the nearest turbines and the boundary of the Park implies that there would be no impact on the farmland or wildlife of the Park. I conclude that the purposes of the National Park would not be compromised.

#### *Llandefalle Common and Surroundings*

16.15 The Common abuts the north east boundary of the appeal site and there is no dispute that Structure Plan Policy EC3 is relevant<sup>49</sup>. The appellant argues that the policy should be given little weight, but it is part of the development plan and must be the starting point. Although no individual assessment was made of the landscape character of any commons prior to their designation as SLA, paragraph 4.41 of the Structure Plan EM recognises that they are many and varied. It also makes it clear that commons are included as SLA because of their generally open, unspoilt outlook<sup>50</sup>.

16.16 This is to my mind an apt description of Llandefalle Common. It is an extensive area of common land where walkers can very easily escape from the sounds and trappings of modern day living and experience a sense of isolation. From most of the Common, particularly the more elevated parts, there are what can only be described as stunning views of the sweep of mountains in the National Park. Nothing at present intrudes on these views since the Ysgwydd Hwch transmitter mast is elevated above the common and out of the important views. Similar views can be had from many points on the C60 road and from the footpath on the southern edge of Llaneglwys Wood, leading from the picnic site where the C60 enters the wood. The footpath is on rising ground elevated above the rolling farmland and there are superb open views across this and the Common to the sweep of the northern escarpment of the mountains in the National Park<sup>51</sup>.

16.17 The appellant has included the appeal site in the High Undulating Plateau LCA, which includes Llandefalle Common<sup>52</sup>. The LCA has been assessed overall as of high/medium landscape quality with the Common as medium quality. Whilst the Council and CPRW maintain that the Common merits a higher quality assessment than the rest of the LCA, the appellant's view appears to concur with the LANDMAP evaluation, which gives it an

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<sup>47</sup> 2.1

<sup>48</sup> 9.14

<sup>49</sup> 3.3, 7.2, 9.4, 10.20-22

<sup>50</sup> 10.25

<sup>51</sup> 3.2, 9.17-8, 10.20-25, 12.5, 12.7, 12.9

<sup>52</sup> 9.8



intrinsic value of ‘moderate’<sup>53</sup>. LANDMAP provides a consistent and rigorous methodology<sup>54</sup> that has the advantages of evaluating smaller areas than the large LCA used by the appellant whilst at the same time being applied to the whole of Brecknockshire. Whilst the LANDMAP evaluation is to be preferred, it hence confirms the appellant’s view.

16.18 My visit to Blaen Bowi confirmed the potentially dominating impact of turbines of the size proposed in this appeal up to around 2 km. I therefore share the appellant’s assessment that the turbines would become one of the defining characteristics of the landscape within 2 km of the turbines<sup>55</sup>, which includes a substantial area of Llandefalle Common. I fail to see how it is possible to conclude from this that the turbines would not reduce the Common’s landscape quality. The closest turbine would be about 160 metres from the edge of the common<sup>56</sup>. All of the northern group would be well within 1 km of the Common and the southern group would be within 2 km. Using the aspects of landscape quality used by the appellant<sup>57</sup>, the ‘clarity’ of the Common’s landscape would be diminished by such large man-made structures. The turbines would seriously harm the ‘intactness’ and ‘balance’ of the Common by introducing features completely alien to the surroundings in terms of their scale and artificial nature. Most importantly, the ‘distinctiveness’ and ‘sense of place’ of the Common stem to a large degree from the opportunity to enjoy magnificent views of the National Park mountain ranges free from any intrusive influence by man. The turbines would have such a dominating and intrusive impact on large areas of the Common, verging on the overwhelming at the closest points, that its distinctiveness and sense of place would be lost.

16.19 I note the appellant’s submission that the effect on a view from part of the Common cannot be material having regard to all the other locations from which that view may be had<sup>58</sup>. But the turbines would not merely affect views in one location. It is correct that the Common extends to the east, from where the turbines would have less of an impact. But there are several footpaths and bridleways crossing the western part of the Common<sup>59</sup>, which would be particularly dominated by the northern group of turbines. Furthermore, the provisions of the CROW Act will give the public the right to access all parts of the Common<sup>60</sup>.

16.20 Turning then to the immediate surroundings apart from the Common, views along the C60 where it borders or lies within the appeal site would be seriously affected, particularly because of the proximity of turbine 4, some 80 metres from the road<sup>61</sup>. This is presently an attractive country road running through a landscape that is largely unspoilt apart from some overhead electricity wires. The conifer blocks are evidently planted, but in my opinion they do not detract from the landscape. Rather they are part of it and in the public eye would be regarded as contributing to it. Because of their proximity the turbines would become the dominating landscape feature from the road and would seriously detract from the character and quality of the surrounding landscape due to their size and alien nature. As cars emerge from Llaneglwys Wood the turbines would loom into view, interfering with and dominating views to the National Park. There would be an even greater impact on the views from the elevated footpath on the southern edge of the Wood that leads from the picnic site. The

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<sup>53</sup> 9.17, 10.24

<sup>54</sup> 10.23

<sup>55</sup> 9.17

<sup>56</sup> 3.3

<sup>57</sup> 9.17

<sup>58</sup> 9.18

<sup>59</sup> 3.7

<sup>60</sup> 12.7-8

<sup>61</sup> 2.1

turbines would seriously intrude into these views of the northern escarpment of the National Park and would mar an otherwise unspoilt rural landscape.

### *Other Locations*

16.21 From Brechfa Pool, some 6.1 km to the east<sup>62</sup>, the turbines would be prominent but not dominant and they would be an acceptable component of the wider landscape. Similar conclusions apply but to a greater extent because of the distance, some 12 km, to the impact from The Begwns. Mynydd Fforest is an area of common land north east of the appeal site, some 3 km away at its closest point. It also has an open, unspoilt outlook and attractive views to the mountains of the National Park. Whilst there would be some impact on this common, it would be nothing like the effect on Llandefalle and would not be unacceptable because of the distance and the division of the turbines into 2 small groups.

16.22 During and after the inquiry I drove many of the roads in the surrounding area. Because of the topography and vegetation there are many locations from where the turbines would not be seen. This is demonstrated by the ZVI, which do not take any account of the screening effect of buildings or vegetation. And the mere fact that the ZVI indicate that at least the tip of 1 or more turbines could be seen over large tracts of the surrounding countryside does not necessarily imply an adverse landscape impact over the same area. Impact depends on distance and the amount of the turbines that can be seen. Nonetheless, from parts of the C60 to the south and the country road to the south west serving Cwrtau-bâch, Rhôs Farm and Garthbreny, the southern group of turbines in particular would be sufficiently close, 2 km and less, as to dominate the landscape because of their size and elevated position.

### *Conclusions on Landscape Impact*

16.23 I conclude that the purposes of the National Park would not be compromised. But the turbines would seriously harm the special character and qualities of Llandefalle Common and would dominate the landscape within 2 km, detracting from its character and quality. Views of the otherwise unspoilt rural landscape from the C60 and from the southern edge of Llaneglwys Wood would be marred. And the turbines would have a dominating impact from parts of the C60 and the road south west of the site.

### *Living Conditions – Noise*

16.24 I begin with the approach to noise assessment, the difference between the Council and the appellant being whether that in BS4142, of comparing predicted with background levels, or that advocated in the ETSU report of setting absolute levels, should be used<sup>63</sup>.

16.25 It is first necessary to correct a claim made by the Council and wrongly accepted in cross-examination that the ETSU report makes no mention of amenity<sup>64</sup>. The report states near the beginning of Chapter 6 on page 43:

*The Noise Working Group has sought to protect both the internal and external amenity of the wind farm neighbour. Wind farms are usually sited in the more rural areas of the UK where enjoyment of the external environment can be as important as the environment within the home.*

Nothing could be clearer. The report contains several references to amenity in Chapter 6.

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<sup>62</sup> 9.11

<sup>63</sup> 9.20-26, 10.26-33

<sup>64</sup> 10.28

16.26 The Council emphasised that BS4142 may be used even where background levels are below 30 dB(A), but the issue is whether it is the most appropriate assessment method. I consider there are several strong arguments for using the ETSU methodology in preference to BS4142:

- The ETSU report was prepared by a group that included both industry and local authority representatives and combined considerable expertise in this form of development, including independent noise consultants<sup>65</sup>.
- As TAN8 points out (A29-30) BS4142 is intended to assess noise from industrial premises and there are several reasons why its use may not be appropriate for wind turbine noise<sup>66</sup>.
- BS4142 states it is not suitable where background and rating noise levels are both very low (below about 30 dB and 35 dB respectively). Most of the properties likely to be affected fall in this category and the Council stresses that this area is characterised by low background noise<sup>67</sup>.
- TAN8 refers in A28 to the detailed information on wind turbine noise contained in the ETSU report<sup>68</sup>. TAN8 does not explicitly advocate its use but it is hardly likely that advice issued by the Assembly Government would direct the reader to the ETSU report if its methodology was considered suspect.
- The ETSU report is addressed specifically at wind turbines and considers in depth the noise issues associated with wind farms. BS4142 states that it is general in character and may not cover all situations.
- BS4142 uses  $L_{Aeq}$  to measure a noise source, but in quiet rural areas brief loud noises can distort the  $L_{Aeq}$  ambient noise level. The ETSU report explains that field measurement has demonstrated that in quiet noise environments the  $L_{Aeq}$  level may be 10-20 dB above the  $L_{A90}$  background. Using the BS4142 methodology will therefore tend to underestimate the contribution of existing noise sources to the  $L_{Aeq}$  when a wind farm is operating. The ETSU report hence recommends  $L_{A90, 10min}$  for wind farm noise<sup>69</sup>.

16.27 For all these reasons the ETSU-R-97 approach is more appropriate than BS4142. The Council's criticisms<sup>70</sup> can be answered as follows:

- The appellant's method of background noise measurements is broadly in line with the ETSU recommendations, in particular the use of polynomial curves<sup>71</sup>. This ensures that the assessment is based on typical rather than extreme values. The Council's calculations showing the range of background levels is more likely to be a distortion of the true picture, since these tend to give greater weight to values outside the norm.
- The background measurements were carried out from 17-31 March 2004, twice the minimum period of 1 week recommended in ETSU-R-97. The report points out (page 85) the effect of measuring background levels at different times of the year. Considering the low rainfall during the measurement period, the appellant's figures are likely to be a reasonable reflection of the background noise conditions in the area. It

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<sup>65</sup> 9.20

<sup>66</sup> 7.6

<sup>67</sup> 9.21, 10.29

<sup>68</sup> 7.6, 9.20, 9.26

<sup>69</sup> 9.23, 10.28

<sup>70</sup> 10.28

<sup>71</sup> 9.22, 10.30-31

should be noted that the Council's measurements of background noise were limited in duration and range of wind speeds, but are nonetheless similar to the appellant's<sup>72</sup>.

- The WHO 30 dB  $L_{Aeq}$  internal night time criterion was considered by ETSU. It has not been endorsed as part of Government policy. But in any event, the appellant's graphs show that the predicted sound levels would meet the WHO criterion, allowing for 10 dB attenuation between internal and external levels, at all the properties likely to be affected, including Llethercynon Farm<sup>73</sup>.

16.28 The Council also argues that there is no assurance that predicted levels would not exceed the appellant's predictions. But the calculations assume the worst case, including low levels of atmospheric absorption; allowing for bending of sound waves by different wind speeds at different heights to enhance wind noise at distance; assuming no reduction for ground conditions, and no reduction for barriers or other factors. Most importantly, the appellant's noise expert has carried out measurements at wind farms to verify predicted sound levels. He confirmed to me at the inquiry that in no case have the measured results exceeded predictions and that they have actually been up to 5 dB less. This confirms that the prediction methodology used is based on a worst case, as claimed, and that reliance can be placed on the appellant's figures. On that basis the appellant's calculations<sup>74</sup> confirm that the ETSU criteria would be met at all the properties likely to be affected up to wind speeds of 11  $ms^{-1}$ .

16.29 Whilst the Council maintains there is no evidence to support the view that the ETSU limits will provide a reasonable degree of protection, 5 dB(A) above background is stated in BS4142 as being of marginal significance. The ETSU report explains that the night time limit of 43 dB(A)  $L_{A90}$  is derived from criteria recommended to prevent sleep disturbance. In any event, the appellant has demonstrated that the more stringent WHO guideline would be met. TAN11 confirms that external night-time noise levels of 45 dB  $L_{Aeq}$  or less are acceptable<sup>75</sup>. This translates to an internal level of 35 dB allowing for attenuation. As ETSU points out, sound levels designed to provide an environment quiet enough not to disturb sleep should be quiet enough not to impair the enjoyment of a patio or garden. The range 35-40 dB  $L_{A90}$  therefore in my view provides sufficient day-time protection, bearing in mind that the lower limit represents a noise that would not disturb sleep even when someone is outside the property and the higher limit would prevent sleep disturbance inside. The actual limit would be set by conditions, which I deal with later.

16.30 On the question of low frequency noise<sup>76</sup>, whilst this is the subject of research and it is accepted that it can be more annoying, no standard used in the UK that specifically takes this into account was presented in evidence. In particular, it is not part of planning advice applying in Wales. Danish noise limits, referred to by the Council, were considered in the ETSU report, which applies penalties for tonal noise. I accept that the study for the Vale of White Horse Council concentrates on tonal peaks, but this confirms that the level of low frequency noise was below the hearing threshold of most people. And the appellant has used research by Watanabe and Moller to demonstrate that low frequency noise for a NORDEX N80 would be below the hearing threshold for even the most sensitive 5% of the population. The Council has not suggested any other means of evaluating low frequency noise from the proposed wind farm or demonstrated that it would be a problem in this case.

<sup>72</sup> 9.21-22, 10.29

<sup>73</sup> 9.23, 10.28

<sup>74</sup> 9.21-22, 9.26, 10.31

<sup>75</sup> 7.6

<sup>76</sup> 9.24, 10.32

16.31 The appellant's calculations of total noise from the wind farm, adding ambient and turbine noise, indicates that the noise levels at Pencaemelyn could be up to 6 dB above the background at 5 ms<sup>-1</sup> wind speed<sup>77</sup>. But 5 dB is classed as of marginal significance by BS4142 and the actual predicted total external noise level is 36.4 dB, which would translate to some 27 dB internally, below the stringent WHO guideline. And it must be remembered that such noise levels are relatively quiet in their own right, 32-33 dB representing a quiet whisper at 3 metres<sup>78</sup>.

16.32 The final matter relates to the possible use of variable speed turbines<sup>79</sup>. The appellant confirms that those available either have gearboxes with tonal noise that would raise other problems or are much larger. Not only would these be more difficult to transport to the site, but it is also unlikely they could be considered as a minor amendment to this application. No evidence was presented by the Council to substantiate their assertion that a variable speed turbine is the best engineering practice for suppressing wind turbine noise. In any event in terms of the impact on residents the appellant's evidence demonstrates convincingly that the turbines would have no detrimental impact on residents in the area from noise.

### ***Living Conditions – Visual Impact***

16.33 The appellant has carried out a commendably thorough assessment of the effect on the closest properties, providing wireframe diagrams showing the views from each property up to and beyond 5km radius of the turbines<sup>80</sup>. It should be noted however that these diagrams make no allowance for buildings and vegetation. It was not possible to visit all the properties in the time available but I visited several where the appellant had assessed the visual impact as major or major/moderate. My conclusions are as follows:

- Rhos Farm (A1)<sup>81</sup> – just over 1km; appellant's assessment: major<sup>+</sup>. There is a clear view of the southern cluster from the immediate vicinity of the farmhouse. The turbines would have a major, dominating impact at this distance.
- Coygen (A2) – just over 1km; appellant's assessment: major/moderate<sup>+</sup>. The southern cluster would not be visible but the farmhouse faces the northern cluster. One turbine would be prominent but trees and ground form would reduce the impact of the group overall to moderate.
- Cwrtau-bâch (A3) – just over 1km; appellant's assessment: moderate. Only the blade tips visible and I therefore agree a moderate impact.
- Y Felin (A5) – 1.23km; appellant's assessment: moderate. The main elevations would not face the turbines and hedges provide some screening. I therefore agree a moderate impact.
- Vale Farm (A9) – 1.85km; appellant's assessment: major/moderate<sup>+</sup>. Only the southern cluster would be visible and partly screened by conifer woodland so that only 1 turbine would be in the open with the tops of the other 2 visible above the wood. I would assess the impact as no more than moderate.

<sup>77</sup> 9.23

<sup>78</sup> 9.22

<sup>79</sup> 9.25, 10.32

<sup>80</sup> 9.27

<sup>81</sup> These reference numbers are those used in the appellant's residential survey APP.KH/4 – App 7

- Pencaemelyn (B1) – 0.68km; appellant’s assessment: major/moderate. Although the tops of the southern cluster only would be visible due to ground form and intervening trees, at this distance they would have a dominating and major impact.
- Funglas Bungalow (B2)<sup>82</sup> – 1.33km; appellant’s assessment: major/moderate<sup>+</sup>. The bungalow faces the proposed turbines, which would be in the centre of the field of view from the main windows of the property, visible above a group of trees. The southern cluster of turbines would be very closely grouped, almost stacked one behind the other. The impact on the outlook from this property would be major due to the overlapping movement of the blades, the scale of the turbines and their elevated and prominent location.
- Cwm Gwilym (C1)<sup>83</sup> – 0.92km; appellant’s assessment: major<sup>+</sup>. A new farmhouse has been built, the rear of which would face the southern cluster of turbines<sup>84</sup>. These would be considerably elevated above the level of the new farmhouse and would be dominating and intrusive because of their scale, proximity and relative elevation, having a severe impact on the outlook from the property. This property would be the most affected and I agree the appellant’s assessment of a major impact.
- Moifa (C7) – 2.72km; appellant’s assessment: major/moderate. The southern cluster would be visible from the side and rear garden but there are some trees that would provide a screen. Because of the distance the impact would be moderate.
- Caebetran-fawr (C10) – 2.89km; appellant’s assessment: major/moderate. The southern cluster would all be visible with limited views of possibly 1 rotor in the northern cluster. The southern cluster would be in a skyline position and in the main field of view. But the distance would reduce the impact and I consider the impact would be moderate.
- Siôp Fach (C19) – 3.41km; appellant’s assessment: no impact. The owner of this property gave evidence at the inquiry<sup>85</sup>. I agree the appellant’s assessment, since almost nothing of the turbines would be seen because of the location in a shallow valley.

16.34 The appellant’s assessment is that there would be a major impact on the residents of Rhos Farm and Cwm Gwilym and my visits confirm this. But in addition I consider there would be a major and severe impact on occupiers of Funglas Bungalow and a lesser although still major impact on the occupants of Pencaemelyn. My conclusions from the other properties visited tend to confirm the appellant’s assessment other than where vegetation, ground form or the orientation of the properties would reduce the impact, which is not apparent from the wireframe drawings as these take no account of such screening. There are a further 8 properties where the appellant has assessed the impact as major/moderate and another 17 assessed as moderate. The appellant’s assessment demonstrates that the proposed windfarm would have a considerable visual impact on the living conditions of residents of a significant number of surrounding properties. The impact on occupiers of Rhos Farm, Funglas Bungalow, Pencaemelyn and particularly Cwm Gwilym would be serious. Although the father of the appeal site owner lives in Pencaemelyn, this does not imply that the occupiers of this property should be given any less consideration.

<sup>82</sup> This is the correct name of the property, which is ‘unnamed’ in the appellant’s survey, not to be confused with Funglas, property B3.

<sup>83</sup> See APP.KH/5 – App 11 for wireframe diagram.

<sup>84</sup> 13.2

<sup>85</sup> 13.3

16.35 I do not accept the appellant's argument that the number of residents affected is insufficient to amount to more than a private interest<sup>86</sup>. This in my view misinterprets paragraph 4.1.7 of PPW, which states that the courts have ruled that individual interests are an aspect of the public interest and advises that development should be considered on the basis of general considerations such as good neighbourliness. In my opinion the visual impact of the proposed wind farm on each individual resident living in the vicinity is an aspect of the public interest. I fail to see how the public interest can be safeguarded by development that would be visually harmful when seen from several neighbouring properties. In this case it is not merely the residents of the properties identified who would be subjected to the adverse visual impact of these turbines but all the people who visit those properties on business or pleasure and people using the roads serving these properties. And in the case of those living in Cwm Gwilym I do not consider that it is in the public interest to impose on them the severe impact that would result if this proposal went ahead. The harmful effect on residents, both individually and cumulatively, weighs heavily against the wind farm.

### ***The Impact on the Historic Environment – Twyn-y-Gaer Hill Fort SAM***

16.36 An archaeological assessment was carried out for the ES, which proposed mitigation measures to minimise damage to visible archaeology and a watching brief<sup>87</sup>. Cadw accepts that the protection of known sites and a watching brief to deal with remains exposed during construction could be covered by conditions<sup>88</sup>. There is no reason to take a different view.

16.37 The Twyn-y-Gaer hill fort is a SAM of national importance and there is a presumption against proposals that would have a significant impact on the setting of visible remains<sup>89</sup>. There would be no direct impact on the area included as part of the SAM<sup>90</sup>. The main concern is the effect on the setting<sup>91</sup>. Once more there is an apparent issue over the extent of the setting, as the appellant argues that the immediate setting extends only about 300 metres and that the C60 road, fences, telegraph poles and conifer plantations disrupt this. But as I have argued in relation to the setting of the National Park, it is wrong to try to analyse setting purely in terms of distance, since it is a concept intended to provide protection, in this case for the historic character and interest of the SAM. I accept that from parts of the C60 close to the hill fort the road could be perceived as a physical limit to the extent of the setting and that some development on the opposite side of the road from the fort could be regarded as outside the setting.

16.38 But that does not apply to these turbines because of their scale. Based on my visit to Blaen Bowi, when I saw turbines of similar size, I consider the southern cluster of turbines would be totally dominating and probably overwhelming to most people when seen from the C60 in the vicinity of the hill fort. The visually dominating impact of the turbines would extend well beyond the C60 onto the immediate surroundings and the scheduled area of the SAM. In addition, the noise from the turbines would be noticeable and intrusive in the vicinity of the hill fort, drawing attention to and emphasising their presence. Such large, intrusive, man-made structures would in my opinion have a serious impact on the immediate setting of the SAM, detracting from its historic character and interest.

16.39 From some more distant points along the C60 to the north of the hill fort it is difficult to see the SAM and so there would be no appreciable impact on its setting. But I observed that

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<sup>86</sup> 9.28

<sup>87</sup> 1.5

<sup>88</sup> 11.3

<sup>89</sup> 7.5, 7.7

<sup>90</sup> 11.3

<sup>91</sup> 9.33-40, 10.40, 11.4-11

from the viewpoint on the southern edge of Llaneglwys Wood (see paragraphs 16.16 & 16.20) the hill fort is readily distinguishable whilst the road is hidden. The southern cluster of turbines would visually dominate the hill fort from this viewpoint, seriously intruding on and detracting from its setting.

16.40 There are long sections of footpath 8<sup>92</sup> to the west and south west of the SAM from where the fort is hidden by land form and vegetation, but there are also extensive sections where clear views are possible. From these locations the fact that this is a hill fort is readily apparent; the outline of the earthworks and ditches can be seen. I do not accept the appellant's argument that the observer is outside the setting looking in. I consider that possibly the greatest impact is from the west and north west. Allowing for limited screening by conifers, from these locations the hill fort would be in the foreground with the southern cluster of turbines looming over the skyline above the SAM, as confirmed by the appellant's wireframe diagrams<sup>93</sup>. Because of their height and form the turbines would be an intrusive and alien feature that would mar the historic character and setting of the SAM in these views.

16.41 Although there is no public access to the hill fort at present, this could change<sup>94</sup>. In any event it would clearly be wrong to ignore the setting of the SAM when viewed from within the scheduled area. The southern cluster of turbines would be some 300 metres away and would exert a dominating, intrusive influence over the scheduled area and its immediate surroundings, significantly detracting from the historic character and interest of the SAM<sup>95</sup>.

16.42 The appellant has also considered the impact in terms of lines of sight to other Iron Age hill forts visible from Twyn-y-Gaer and has demonstrated that these would not be significantly affected<sup>96</sup>. Even if the turbines impinged on views of Twyn-y-Gaer from other hill forts in the surrounding area, these are too far away for the viewer to appreciate the direct impact on the setting of this SAM. Nonetheless, the dominating and intrusive impact of these turbines on the closer views from nearby roads and footpaths, and from the SAM itself, would cause significant harm to the setting of the archaeological remains.

#### *Landscape of Special Historic Interest*

16.43 The Middle Usk Valley: Brecon and Llangorse Landscape of Special Historic Interest lies about 4.8km south of the proposed southern cluster of turbines<sup>97</sup>. PPW states in paragraph 6.5.23 that information on such landscapes should be taken into account in considering the implications of development of such a scale that it would have more than a local impact<sup>98</sup>. There are hill forts within the historic landscape from which the turbines would be clearly visible, notably Pen-y-Crug and Twyn-y-Gaer on Mynydd Illtyd common. I have concluded above that the impact on the landscape in views from both locations would be limited (paragraphs 16.11 and 16.12). The Guide to Good Practice on using the Register of Landscapes of Historic Interest in Wales [CD5.0.3] states that the intention is not to fossilize landscapes but to manage them in ways that allow the key historic elements and characteristics of the past to be retained while meeting modern needs. The Guide recognises that effect on the setting of a landscape will need to be considered, but it must be remembered that the purpose of designation is to ensure that the designated landscape is

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<sup>92</sup> 3.7, 9.35-6, 11.6-7

<sup>93</sup> 9.36

<sup>94</sup> 11.8

<sup>95</sup> 11.6

<sup>96</sup> 9.37

<sup>97</sup> 9.41-44, 11.5

<sup>98</sup> 7.5



managed appropriately. In view of the distance between these turbines and the designated historic landscape I am satisfied that they would not affect its historic interest, its key historic elements, or its historic character.

16.44 The same conclusion applies to the Middle Wye Valley Landscape of Outstanding Historic Interest, which lies at least 5.5km from the nearest turbines.

### ***Local Economy - Tourism<sup>99</sup>***

16.45 Dealing first with the evidence put forward to demonstrate an impact on tourism, no survey results were submitted to show that there has been any effect on the tourist industry in Denmark. The appellant has contacted the London office of the Danish Tourist Board, which has no knowledge of any such survey or any adverse impact on tourism. The appellant submitted the survey for Visit Scotland. This in fact states on page 8 that there have been no major positive or negative impacts on tourism recorded in Denmark. Most trade respondents were more positive than negative towards the impact of wind farms on tourism. Whilst 29% considered that wind farms detracted from the experience of the countryside when prompted, only 1 person stated they disliked wind farms without being prompted and 75% of visitors were either positive or neutral towards wind farms. It is difficult to establish any clear conclusions from this study, but to my mind it does not demonstrate any adverse effect on tourism.

16.46 The survey for the Welsh Tourist Board is still in draft and contains no conclusions. But the survey findings indicate that wind farms do not affect 68% of visitors and only 2% would be less likely to return. Research supervised by the WTB indicates that 96% of visitors would not be put off visiting Wales by more windfarms. Whilst a study sponsored by the Friends of the Lake District indicates that 22% of visitors would return less often if the number of wind farms increased significantly, it would be incorrect to interpret this as implying a 22% reduction in the number of tourists. There are many more surveys in popular tourist areas that report no effect on tourism from wind farms, particularly in Cornwall and Cumbria, which have many windfarms but visitor numbers are increasing<sup>100</sup>.

16.47 I heard the concerns of those involved in the tourism industry at the inquiry and I understand both their concerns and the importance of this industry to the local economy. But there is no real evidence to show that wind farms discourage tourists. The evidence tends to show that there is no effect. I have concluded that the wind turbines would have a serious impact on the local landscape and on Llandefalle Common. But the area around Brecon is rich in natural attractions. Visitors may be put off going to Llandefalle Common but there are many other places to go. In spite of the landscape impact I have identified I do not consider there would be any material impact on the number of tourists likely to visit the area in the future and hence no significant adverse impact on the local economy.

### ***Highway Safety***

16.48 The access route to the site is along country roads that are single width for parts of their length. The ES identifies a section not wide enough for 2 heavy goods vehicles to pass<sup>101</sup> but the restricted width would in my view prevent 2 cars passing. I looked at the route to the Parc Cynog wind farm near Pendine at the Council's request, since the appellant advanced that at the inquiry as another wind farm with access along narrow country

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<sup>99</sup> 9.45-47, 12.9

<sup>100</sup> 9.46

<sup>101</sup> 3.8

roads<sup>102</sup>. But the roads leading to that site are generally of a better standard than those serving the appeal site in terms of width, alignment and forward visibility. There was nothing to indicate that vehicles had to reverse along parts of that route in similar fashion to the need in this case to reverse along the B4602 because of the acute angle of turn to Llanddew<sup>103</sup>. Nor is there anywhere on that route where a special trailer with manual rear wheel steering would be needed, as would be required in this case because of the width and alignment of the road through the centre of Llanddew<sup>104</sup>. But the issue is whether the access to the appeal site is suitable, not how it compares with the Parc Cynog site.

16.49 It is clear that traffic management measures would be needed to deal with the issues of reversing on the B4602, negotiating the centre of Llanddew and the restricted width and lack of passing places on the section of the C0223 south of the site. However, the type of traffic management scheme required would not appear to raise any insurmountable problems or ones that could not be dealt with by normal techniques. As the ES points out in paragraph 3.6, the 2 borrow pits proposed would avoid the need to import stone for the access roads. And whilst no details of such a scheme are available, the Council conceded at the inquiry that a traffic management scheme could be developed to overcome the problems of access to the site for construction vehicles<sup>105</sup>.

16.50 However, the issues that would not be overcome would be the inconvenience to other road users and the disruption, disturbance and inconvenience to the residents in the centre of Llanddew<sup>106</sup>. The inconvenience to other road users would be finite and relatively short-lived, as would the noise and disturbance of heavy vehicles passing through Llanddew. The projected construction period is 16 weeks<sup>107</sup>. Furthermore, large vehicles already use these roads to serve the surrounding agricultural community. I agree with the appellant that in practice, if there were no other problems, it should be possible to travel from the A470 to the site in less time than the trial run, which was attended by a number of people and was slowed by the need for observation. But this is still going to take an appreciable time and I doubt if it would be halved. Whatever the precise length of time, the village would come to a standstill when the blades and base section of the tower would be passing through the centre of Llanddew, when manual steering would be required. This would involve a total of 15 trips, 9 for the blades and 6 for the turbine base sections.

16.51 Furthermore, I remain concerned about the possibility of a problem occurring at this point. The dummy run demonstrated that there is little room for error because of the narrowness of the road and its offset alignment. The SAM on the north side of the junction and the side wall of Castle House, which is on the edge of the highway on the north east side of the junction, make the task even more difficult<sup>108</sup>. Although the trailer successfully passed through the village it was not loaded. I appreciate that the trailer was at the width and length to transport the blades. But if the base section of the tower were being transported it could not take the same line through the junction as in the dummy run, since it would pass too close to the wall of Castle House to allow for the projection over the sides of the trailer. Bearing in mind the size and length of the components to be transported and the narrowness and alignment of the route through Llanddew, there appears to be no margin of safety. The appellant's transport consultant acknowledged that access to the appeal site is tight and from

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<sup>102</sup> 4.1

<sup>103</sup> 5.3

<sup>104</sup> 5.2

<sup>105</sup> 9.32, 10.39

<sup>106</sup> 9.30-31, 10.38-39

<sup>107</sup> 2.3

<sup>108</sup> 3.1

my inspection I agree. No reassurance can be gained from the construction of the Parc Cynog wind farm. I consider that the transport of components through the centre of Llanddew would cause considerable and possibly prolonged disruption to residents, and the real risk of damage to buildings and a SAM.

### ***Other Matters***

16.52 Dealing first with the effect on **horses and horse riders**<sup>109</sup>, there is general agreement that sudden movement startles horses. I also accept that decisions should not be based on a view that all horse riders are highly competent and experienced. But in spite of the distances recommended by the BHS there is no evidence or research to substantiate these distances or to support the claim that wind turbines are likely to cause horses to react or put riders in any other danger. Evidence for the appellant is to the contrary. In any event, Bridleway 11<sup>110</sup>, used by a riding organisation as part of a long distance route, is 300 metres away, which exceeds the BHS standard. The closest bridleways would be Nos 12 and 13, which would be around 130 metres from turbines 5 and 6 respectively. Although rather less than twice the turbine height this should be ample to avoid any undue impact on horses, particularly as the turbines would be seen from a distance and hence less startling. In addition, even if the blades start to rotate as a horse is passing, the initial movement of the blade would not be so sudden that it would be likely to startle either a horse or rider. The closest horses and riders would get would be on the C60 road, where they would pass about 75 metres from turbine 4, equivalent to the height of the turbine to the tip. But again the turbine would be in clear view and, bearing in mind the lack of any evidence to substantiate the claimed impact, there is nothing to indicate that horses would be likely to react at this distance. TAN8 contains no advisory distance in relation to footpaths or bridleways. I therefore do not consider there would be any adverse safety implications for horses or riders.

16.53 **Mrs Jones** was understandably concerned at the impact on her disabled son<sup>111</sup>. However, there is no medical evidence to support her claim that he would be so badly affected by the turbines that he would be unable to go out or cross Llandefalle Common. The Common is sufficiently large for him to go riding in areas where the horses would be quite unaffected by the turbines. A condition could be attached to require the appellant to correct any effect on television reception<sup>112</sup> and the turbines cannot be seen from Siop Fach, where he lives. There is no risk of **shadow flicker** affecting anyone living in the surrounding area<sup>113</sup>.

16.54 **Mrs Chapelle** was concerned about the impact on bird life<sup>114</sup> but this is not a concern of the Council. The CCW recommended refusal on grounds of the impact on the National Park. However, in its comments on the application it stated that the significance of birds striking turbine blades remains the subject of research and debate. It added that large raptors such as Goshawk and Kite regularly hunt over the appeal site and are known to breed close by and that there could be some risk of collision with turbine blades. I saw a Red Kite flying over Llandefalle Common during my site visit.

16.55 The effect on bird life is dealt with in section 6.6 of the ES<sup>115</sup>. It indicates that although Goshawk were not recorded it is likely they nest in Llaneglwys Wood but would not be at risk, being a woodland hunter. One Red Kite and several other priority species were

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<sup>109</sup> 9.49-50, 12.3, 12.9, 13.1

<sup>110</sup> 3.7

<sup>111</sup> 13.3

<sup>112</sup> 9.29

<sup>113</sup> Ditto

<sup>114</sup> 13.4

<sup>115</sup> 1.5

recorded in the surveys but were not thought to be wholly dependent on the site. The ES indicates the hunting range of the Red Kite may be marginally reduced, but it confirms there is little evidence to suggest that wind turbine strikes occur with this species. It concludes that the overall risk of collision between birds and wind turbine blades is not significant. Although the article submitted by Mrs Chapelle supports the view that wind turbines pose a threat to bird life, it refers only to problems in the USA. It contains no evidence of a problem in this country. In view of the lack of any evidence to support the claim that the wind turbines would be a risk to bird life, I accept the conclusions of the ES. To minimise disturbance of breeding birds, it recommends that construction take place outside the breeding season; this could be dealt with by a suitable condition.

16.56 The effect on **television reception**<sup>116</sup> would be dealt with by the appellant and can be covered by a suitable condition. There is nothing to indicate that the **water table or water run-off**<sup>117</sup> would be affected by the proposals. The scale of the construction works in terms of their physical area makes this unlikely. The turbines would be a minimum of the height of the turbine from the road, complying with the advice in TAN8 in order to protect the **safety of drivers**. With regard to future development and the concern of some that approval of this wind farm would set a **precedent for future wind farm development**, each application must be considered on its merit and future proposals to extend this wind farm would require a fresh application for planning permission.

16.57 Turning to the off-site **grid connection**<sup>118</sup>, this is not part of the application and is therefore not a matter before me. The provision of that connection would be a matter for negotiation between the appellant and the electricity undertaker responsible. The appellant stated at the inquiry that it was intended that the connection would be wholly underground and that sufficient money would be provided to ensure this.

### ***The Balance of Harm and Benefits***

16.58 In this section I bring together my conclusions on the previous issues and balance the harm I have identified against the need for and benefit of the proposals. In relation to the first issue and landscape impact I conclude that the purposes of the National Park would not be compromised and so there would be no conflict with Structure Plan Policy EC2. But the turbines would seriously harm the special character and qualities of Llandefalle Common, would mar views of the otherwise unspoilt rural landscape from the C60 and from the southern edge of Llaneglwys Wood, and would dominate the landscape within 2 km. This would conflict with Structure Plan Policies EC3, EC4 and EC7. On issue 2 and the living conditions of residents, I conclude that noise would not be detrimental but that the severe visual impact on residents, both individually and cumulatively, weighs heavily against the proposed wind farm. This would conflict with Local Plan Policies B89 and B90. In relation to the third issue and the historic environment, I find no harm to the historic landscape but the dominating and intrusive impact of these turbines would cause significant harm to the setting of the Twyn-y-Gaer hill fort SAM. This conflicts with Structure Plan Policy EC16 and Local Plan Policy B89. I find no harm in respect of the fourth issue, the local economy and tourism. But in relation to highway safety, issue 5, I consider access through the centre of Llanddew to be unsuitable since the transport of components through the centre of the village risks considerable disruption to residents, and possible damage to buildings and a SAM. This conflicts with Structure Plan Policies T3, T12 and EC20(A) and Local Plan Policies B89 and B90.

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<sup>116</sup> 9.29

<sup>117</sup> 14.2

<sup>118</sup> 2.4, 9.57

- 16.59 There is hence considerable conflict with the applicable development plan policies and with national policies stated in PPW and Circular 60/96 aimed at preserving archaeological remains and their settings. Against this must be set the clear policy and commitment of the Assembly Government to meeting UK Government targets for reducing harmful emissions and facilitating the development of renewable energy resources set out in PPW and TAN8. The 2003 UK White Paper confirmed the target of a 20% reduction in CO<sub>2</sub> emissions by 2020 and 60% by 2050 and points out that 1250MW of renewable energy capacity will be needed every year for the next 7 years, when only 1200MW has been built to date<sup>119</sup>. In spite of the arguments of CPRW and BAWT<sup>120</sup>, there is no indication that wind energy will not have to play a major role in the achievement of these targets. The White Paper keeps this as one of the 3 key elements in the 2020 target and no evidence was presented at the inquiry to indicate that the Assembly Government takes a different view.
- 16.60 There is thus considerable weight on both sides of this argument. The proposed wind farm would contribute significantly to the cumulative total of energy from renewable sources. Whilst CPRW and BAWT argue that the output would be tiny<sup>121</sup> a number of such schemes would be needed to meet the Assembly Government's aims of contributing to meeting UK emissions targets. But it remains necessary to balance the contribution to renewable energy production against the harm that would be caused, which in this case would be substantial.
- 16.61 The harm to the setting of the Twyn-y-Gaer hill fort would be considerable because of the scale and proximity of the turbines. In many views, particularly from within the scheduled area, they would loom above the hill fort and exert an alien, man-made influence that would seriously detract from its historic character. Considerable impact on the landscape is, as suggested by the appellant, an inevitable feature of a wind farm in a rural setting. But that cannot mean that this always has to be accepted. In this case the views out over the lower agricultural land to the east and south, towards the Brecon Beacons, are both remarkable and stunning. If it were just views from the C60, or the elevated viewpoint on the edge of Llaneglwyys Wood, then the balance would be much closer. But in this case these views are also from numerous points on Llandefalle Common, where people come to experience the isolation and to escape from the influence of man. I do not consider it an exaggeration to say that the turbines would destroy that experience over the western part of the Common. The noise generated by the turbines would be a further detraction from the peace and tranquillity of the Common, part of its essential character<sup>122</sup>. To be added to this is the serious visual impact on the residents of an admittedly small number of neighbouring houses. It could be argued that it is in the greater public interest to build this wind farm for its contribution to renewable energy. But I do not accept that such an argument justifies the severity of the impact in this case, particularly on the residents of Cwm Gwilym and Funglas Bungalow. The adverse visual impact would also be experienced by the visitors to those houses, both on pleasure and business. Lastly, the access to the site would cause severe disruption to residents in Llanddew and, despite the trial run, there would be no margin for error in the village. The risk of damage to property or to the SAM, or at the least of blocking the crossroads in the village for lengthy periods, is very real. This would not be conclusive on its own but it adds to the heavy weight of considerations against this proposal and leads me to the clear conclusion that this is not the right location for a wind farm.

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<sup>119</sup> 9.51

<sup>120</sup> 12.2-3, 12.16

<sup>121</sup> 12.3

<sup>122</sup> 10.27, 12.5

**Conditions<sup>123</sup>**

16.62 The list of conditions discussed at the inquiry with amendments agreed by the parties is in CD45. I have annexed to this report the conditions that in my view need to be attached should the National Assembly not accept my recommendation and allow the appeal. I have amended the suggested conditions to accord with Circular 35/95. I set out below my comments on the disputed conditions and my reasons why the proposed condition should or should not be attached. The numbers in the first column are those of the conditions discussed at the inquiry [CD45] and those in the second column are the equivalent conditions listed in the Annex:

1	1	It is not normal nor is there any justification for requiring 7 days notification.
2	2	To require development to accord with the ES is vague in view of the range of information in this document and all necessary details can be covered by conditions. The condition has been modified to require compliance with the application and amended plans; the correct date of receipt of the amended drawing Figure 2 was 13 June 2001.
3	3	The life of the installation is expected to be 25 years and the condition should be for this period rather than from the date of the permission, as suggested by CPRW. It is needed to secure the restoration of the site.
4	4	It is necessary to restrict the extent of minor variations to protect archaeology and rights of way. But a condition that ensures approval is sought for any variations rather than limiting by distance or specific grid reference is more reasonable and, with condition 2, gives the necessary control. Details of the control building are included in condition 2 and only the location should be covered in this condition.
5	5	Necessary to ensure redundant turbines are removed to avoid landscape damage.
6	6	The type of machine did not form part of the application. But noise calculations were based on a Nordex N60 and so it is necessary to ensure that this or a turbine with similar noise characteristics is installed.
7-8	7-8	Needed in view of the difficulty of transporting other turbines through Llanddew.
9-13	9-13	Necessary to ensure that the visual impact of the turbines is minimised.

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<sup>123</sup> Section 15

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|-----------------|-----------------|--|
| 14(a)-<br>14(u) | 14(a)-<br>14(t) | <p>(a)-(c), (e)-(k), (o), (t) and (u) are necessary to ensure the development is carried out in a satisfactory manner that has the minimum impact on the surrounding area.</p> <p>(d) needed since the type of machine was not part of the application.</p> <p>(l) &amp; (m) are needed to ensure noise from the turbines is adequately monitored.</p> <p>(n) needed to avoid adverse impact on television reception.</p> <p>(p) not needed since any lopping along the access route would not exceed normal highway requirements.</p> <p>(q) necessary to protect highway safety because of the restricted width of access roads; delete 'to the satisfaction of the local planing authority',<sup>124</sup> for imprecision.</p> <p>(r) necessary to protect highway safety.</p> <p>(s) in view of the time since the ES was prepared it is necessary for a further survey of those species whose use of the site was initially highlighted; this should include badgers and otters as both are identified in the ES but need not include all notifiable species as the ES showed no others.</p> |
| 15              | 15              | Needed to avoid any adverse impact on breeding birds as identified in the ES.  |
| 16(a)<br>& (b)  | 16              | A condition requiring archaeological supervision is needed in view of the remains on the site identified in the ES and the presence of the SAM. The initial condition is excessive because of the effective control given to the archaeologist. I recommend condition 16(a) since any excavation has the potential to uncover or disturb remains, even though it may be intended to limit the depth of excavation.   |
| 17-20           | 17-19           | Conditions governing the noise of the turbines are necessary to protect neighbours. The ETSU-R-97 report [CD21] explains that $L_{A90}$ is the most appropriate measure for wind turbine noise since it allows reliable measurements without the effect of brief loud noises. It also explains that 35 dB $L_{A90}$ is the appropriate minimum absolute noise level. A lower limit would not be justified as 35 dB is sufficient to protect residents (see para 16.29). Since 35 dB $L_{A90}$ is to be used, a separate condition for Pencaemelyn is unnecessary and 18 is deleted.  |
| 21              | 20              | A condition to secure noise monitoring is needed but the condition suggested is unreasonable and imprecise, since the developer would not know what had to be done to comply with it. The insertion of 'reasonable' is no cure. I have drafted a condition that requires a monitoring scheme in accordance with the ETSU guidance to be submitted for approval.  |
| 22              | 21              | This is necessary to minimise the impact of noise during construction. Note that the 1900-2300 noise limit has been changed to 57 dB $L_{Aeq, 1hr}$ as agreed at the inquiry <sup>125</sup> .  |

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<sup>124</sup> This has been done with all the proposed conditions.

<sup>125</sup> 15.1, page 41

23-28 & 30-32	22	In my view it is excessive and unreasonable to specify the detail to this level by conditions; it is inflexible and gives no scope for variation. A single condition only is required to ensure the submission and approval of these details, to protect highway safety.
29	23	Necessary to protect highway safety and provide parking clear of the highway but unreasonably detailed; only needs a scheme to be submitted for approval.
33	24	The replacement of trees and hedges is necessary to protect the appearance of the locality but the condition requires redrafting to accord with the Circular.
35	25	Needed to protect the safety of residents and children in Llanddew at the beginning and end of the school day.
36	26	Needed to ensure the reinstatement of the borrow pits after construction but redrafting necessary regarding implementation.
37	-	Not needed; no work is planned in this part of the site and conditions 14(a)-(c) and (f) would ensure the Council retained control of excavations for tracks and cables.

16.63 It is not normal practice to include information notes such as those proposed by the Council in appeal decisions. There is no need in this case and the Council can provide such details if the appeal is allowed.

### ***Mitigation Measures***

16.64 Chapter 13 of the ES<sup>126</sup> sets out the mitigation measures covering landscape and visual impact, ecology, agriculture, archaeology, noise, electro-magnetic interference, public access and construction. Section 5 of the proof of the appellant's landscape witness also covers measures [APP.KH/2 – page 14] to mitigate the effect on landscape character and visual amenity, on the historic landscape and on the setting of the Twyn-y-Gaer SAM. The conditions set out in the Annex also include a number of mitigation measures, particularly in relation to the landscape and visual impact, noise, access and highway safety, and archaeology. But none of these mitigation measures or conditions is sufficient individually or cumulatively to alter my conclusions in the preceding paragraphs. In reaching these conclusions I have considered the information in the ES, the responses from statutory consultees and others, the additional information supplied under Regulation 19 and all other information on the environmental effects of the proposals.

### ***Summary of Conclusions***

16.65 I have explained in paragraph 16.61 that the heavy weight of considerations against this proposal leads me to conclude that this is not the right location for a wind farm. There is nothing to set against this conclusion in terms of the need for this particular site. This is not the appellant's argument, which is not based on a specific need but a general need to develop a number of sites to meet Government targets. Such a need can equally be met on other sites. I acknowledge that many sites in Wales are constrained by landscape and other designations. But I do not accept that other sites cannot be found that are less constrained in terms of proximity to a valued area of common land, to which public access will widen under the CROW Act, the presence of a SAM, the proximity of affected residential properties, and access difficulties. I conclude that the severe cumulative harm and serious

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<sup>126</sup> 1.5



conflict with a number of development plan policies outweigh the general benefit of these proposals in terms of the contribution to meeting renewable energy targets.

### **17. Recommendation**

*File Ref: APP/T6850/A/03/1122720*

17.1 I recommend that the appeal be dismissed.

Inspector

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## ANNEX: LIST OF CONDITIONS

1. The development hereby permitted shall be begun before the expiration of 5 years from the date of this permission.
2. The development hereby permitted shall not be carried out except in complete accordance with the application reference B/00/0111 dated 13 April 2000 and the plans submitted therewith, as supplemented by the additional plans LC/TD/Borrow Pit 1/A and 2/A received on 21 August 2000 and the amended drawing Figure 2: Site Layout received on 13 June 2001, and including the details of the control building shown in Figure 8 of the Environmental Statement and the details of the anemometer mast in Appendix A of the Statement.
3. The permission is for a period not exceeding 25 years from the date that the electricity from the development is first supplied to the electricity supply system. Twelve months before the date for the cessation of electricity generation at the site, or 24 years after the commencement of generation whichever is the sooner, the applicant shall submit a scheme for the removal of the turbines, sub-station and the removal of the surface elements of the development and foundations to a depth of not less than 1 metre. The approved scheme shall be fully implemented within 3 months of the cessation of electricity generation or the date of agreement of the scheme by the local planning authority, whichever is the later.
4. Unless prior agreement to a variation has been given in writing by the local planning authority the turbines, monitoring mast, control building and transformer compound shall be located as shown on the amended drawing Figure 2: Site Layout received on 13 June 2001.
5. If any wind turbine generator hereby permitted fails to produce electricity for supply to the electricity system for a continuous period of 6 months (the cessation period) then unless otherwise agreed in writing by the local planning authority a scheme for the decommissioning and removal of the wind turbine generator shall be submitted to the local planning authority within one month of the end of the cessation period. The scheme shall include details for the restoration of that part of the site and shall be fully implemented within 3 months of the date of its written approval by the local planning authority.
6. Unless the local planning authority gives written consent to any variation, the type of turbines to be used shall be dual speed Nordex N60 1.3MW machines with the 'changeover' rotational speed set at wind speeds of about  $7\text{ms}^{-1}$  at 10metres high or machines with similar properties.
7. The maximum length of turbine blade to be used shall be strictly limited to 29 metres, consisting of a 25.2 metre section and a blade tip 3.8 metres long capable of being removed for transportation purposes to and from the site.
8. The tower for the wind turbines shall be delivered to the site in three sections with the base section being a maximum rim diameter of 3.82 metres, and a maximum length of 15 metres per section.
9. The wind turbine generators shall have a semi-matt finish and be light grey in colour unless a variation is otherwise agreed in writing by the local planning authority and the agreed colour shall thereafter be maintained.
10. No approval is hereby granted for any turbines having external transformers or external stairways, or viewing platform.
11. The blades of all wind turbine generators shall rotate in the same sense.

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12. No part of the development including any wind turbine shall display any name, sign, symbol, logo or any other form of advertising.
  13. There shall be no illumination of any turbine or of any part of the site without the prior written consent of the local planning authority.
  14. No development shall commence until a scheme of details in respect of each of the following matters has been submitted to and approved in writing by the local planning authority. Development shall be carried out in accordance with the approved scheme:
    - (a) The design, construction, materials and surface water drainage of the access tracks within the site and for any works to existing tracks or the approaches to the site which are necessary to facilitate the transport and construction phase of the wind turbine generators.
    - (b) Details of the temporary tracks and permanent tracks indicating track widths, construction details and materials and their restoration.
    - (c) Details for the siting, design, layout, fencing, security night-time lighting and drainage of any temporary buildings and compound for use by construction workers for parking and for the storage of materials, plant and equipment. The scheme shall include provision for clearing and reinstatement of the site at the end of the construction period and a timescale for that reinstatement.
    - (d) Full details of the turbine design, specification and foundations.
    - (e) The external finishes and materials of the sub-station, control building and palisade fencing.
    - (f) For the laying underground of all electricity cables and all other services within the site boundary.
    - (g) The improvement of the highway from Lynwood (the junction of the C0223 and the C0060) to the northern most part of the site which shall be fully implemented before construction work commences on the application site
    - (h) The construction of an access to serve the northern borrow pit.
    - (i) Details of a compound for the storage of oils, fuels and chemicals that shall provide for an impervious base and bund.
    - (j) A scheme for marking the boundaries of all archaeological remains within the site identified in the Environmental Statement for the purposes of protecting those remains.
    - (k) Measures to ensure that all foul sewage drains to an approved foul sewage and/or sewage drainage system during the construction period.
    - (l) A scheme for the keeping and supply of data on wind speed and direction to enable the monitoring of compliance with noise limits.
    - (m) A scheme for the measurements of turbine noise levels, background noise levels and objective tonality.
    - (n) All necessary mitigation measures and alternative arrangements to resolve any possible interference with communication networks, including domestic television reception, which can be attributed to the operation of the turbine development. The approved measures shall be implemented before electricity is supplied from the site.
    - (o) Details of the disposal of any surplus spoil produced during the course of development, including arrangements for the grading and seeding of any areas used to deposit spoil. The agreed scheme shall be completed within 6 months of the completion of tipping or as otherwise agreed in writing by the local planning authority.
    - (p) The management of traffic during the construction period of the proposed wind farm. The approved scheme shall be fully implemented for the entire construction phase.
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- (q) A scheme for control of the traffic to and from the borrow pits.
  - (r) The results of a survey to establish whether there are badger setts or otters on the site. In the event of setts or otters being found on the site, a mitigation scheme shall be submitted to and approved in writing by the local planning authority and fully implemented before development commences.
  - (s) A scheme for dust suppression during the construction stage of development, to ensure that dust does not constitute a nuisance for local residents, land users or other highway users. The approved scheme shall be fully implemented throughout the construction period on the site.
  - (t) The landscaping of the control building and transformer compound. The approved scheme shall be fully implemented during the first planting season after the commencement of development.
15. No development shall be carried out during the main bird breeding season defined as between the beginning of March and the end of July in any year.
16. Before development commences the applicant shall submit for the approval of the local planning authority a programme and method statement for archaeological work on the site. This statement shall provide for the appointment of a suitably qualified archaeologist to be approved by the local planning authority to be present on site at all times during the excavation period to observe, record and, if necessary, investigate and remove any remains, artefacts or features of archaeological interest uncovered during the construction stage of the development, in accordance with the approved scheme and subject to curatorial monitoring. The scheme shall also provide for the surface of each borrow pit and turbine base, monitoring mast, access tracks, transformer building and any other structure and cable routes to be stripped of topsoil with archaeological supervision and left clear of work for a period of seven working days to allow initial inspection of the sub surface features. In the event of features of interest being revealed, the methodology within the approved programme shall be followed to ensure appropriate archaeological response. A report of the archaeological work undertaken on the site and of the curation, conservation and appropriate deposition of any artefacts removed from the site shall be deposited with the Clwyd Powys Archaeological Trust Sites and Monuments Record and the local planning authority within a period to be specified in the submitted scheme.
17. The combined noise from the permitted turbines shall not at any time, in wind speeds of up to  $12 \text{ ms}^{-1}$  at 10 metres high, exceed a free-field  $L_{A90,10\text{min}}$  noise level of 35dB or a level of 5dB above the existing background  $L_{A90,10\text{min}}$  noise level, whichever is the higher, at any dwelling with the exception of Llethercynon Farm.
18. The combined noise from the permitted turbines shall not at any time, in wind speeds of up to  $12 \text{ ms}^{-1}$  at 10 metres high, exceed a free-field  $L_{A90,10\text{min}}$  noise level at Llethercynon Farm of 45dB or a level of 5dB above the existing background  $L_{A90,10\text{min}}$  noise level, whichever is the higher.
19. If the turbine noise specified in conditions 17-18 inclusive above at any dwelling contains a tone that is 2dB or more above the audibility threshold when assessed objectively a tonal penalty shall be added to the emission level measured at that dwelling. The tonal penalty shall be  $(5 \times E/6.5)$ dB when E, the tone exceedance above the audibility threshold, is between 2-6.5dB inclusive and shall be 5dB when the tone exceedance above the audibility threshold is greater than 6.5dB.
20. No development shall take place until a scheme for monitoring noise emissions from the turbines in accordance with the guidance in the ETSU-R-97 September 1996 report detailing the measures to be taken and the arrangements to be made to ensure compliance with conditions 17-19 above has been submitted to and approved in writing by the local
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- planning authority. The scheme shall include the monitoring of noise emissions within 3 months of the first supply of electricity from the site and at least annually for 3 years thereafter and the measures to be taken in the event of a complaint being received by the local planning authority. The approved scheme shall be followed at all times during the life of the development.
21. During the construction period, the noise from the site shall not exceed 70dB  $L_{Aeq,10min}$  free-field at any noise sensitive property between the hours of 0700-19.00 and 57dB  $L_{Aeq,1hour}$  free-field between 1900-2300. No construction work shall be carried out on the site after 2300 or before 0700 on any day.
  22. No development shall take place until full details of the accesses into the site and to Llethercynon Farm including the location of access gates (which shall not open over the highway), the visibility (which shall be 4.5 x 90 metres other than the visibility to the south at the Llethercynon Farm access which may be reduced to 70 metres), and the details of construction have been submitted to and approved in writing by the local planning authority. The accesses shall be constructed in accordance with the approved details prior to the commencement of any construction works other than those works associated with the highway improvements laid down in condition 14(g).
  23. Prior to the commencement of any construction works, provision shall be made within the appeal site for the parking of all construction vehicles together with a vehicle turning area in accordance with details to be submitted to and approved in writing by the local planning authority.
  24. No hedges or trees shall be removed without the prior written approval of the local planning authority. Any hedgerows that are removed or trees that are felled, shall be replanted with trees of a similar species as that removed in the first planting season following the completion of the development or as otherwise agreed in writing by the local planning authority. Any trees or hedgerows that die or are destroyed shall be replanted during the immediately following planting season and shall be maintained for a 3-year period. The centreline of any new or relocated hedge should be positioned not less than 1 metre to the rear of any visibility splay.
  25. There shall be no deliveries of materials or components to the site before 0700 or after 2200 on any day nor between 0830-0930 or 1530-1630.
  26. The borrow pits shall be constructed and the topsoil shall be stored strictly in the positions shown on the additional plans LC/TD/BORROWPIT 1/A and LC/TD/BORROWPIT 2/A received on the 21 August 2000 or as otherwise agreed in writing by the local planning authority. During the next planting season following completion of the construction of the turbine bases and access roads the two borrow pits shall be reinstated to the levels shown on the said plans and shall be covered with topsoil and seeded with grass.

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## APPENDIX 1: APPEARANCES

### FOR THE LOCAL PLANNING AUTHORITY:

Ms Tina Douglas	Of Counsel
She called:	
Mr Graham Rock BSc MSc MIOA	Graham Rock Acoustics Consultancy
Mr Martin Gregory	Team Leader (Pollution), Powys CC
Mr Ian Roberts Dip TP MRTPI	Head of Development Control, Brecon Beacons National Park Authority
Mr J W Champion BA BLD MSc MLI MIEEM	Director, John Champion Associates Ltd
Mr Ray Woods BSc	Area Officer (East), Countryside Council for Wales
Mr Arwyn Evans DipTP MRTPI	Brecknockshire Development Control Manager, Minerals and Waste Officer, Powys CC
Ms Alison Brown	Area Development Control Officer, Powys CC

### FOR THE APPELLANT:

Mr John Houghton	Solicitor, Bond Pearce Solicitors
He called:	
Ms Kay Hawkins BSc BLD MLI	E4environment Ltd
Mr Malcolm Hayes BSc MIOA	Hayes McKenzie Partnership
Mr David Stewart MA DipTP MRTPI	David Stewart Associates
Mr David Collett	Managing Director, R Collett & Sons (Transport) Ltd

### FOR CADW:

Dr Siân Rees BA PhD FSA	Inspector of Ancient Monuments, Cadw
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### FOR THE CAMPAIGN FOR THE PROTECTION OF RURAL WALES (CPRW) & BRECON AGAINST WIND TURBINES (BAWT):

Mr Geoffrey Sinclair	Principal, Environmental Information Services - he also gave evidence in person
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He called:

Mr Peter Ogden BSc MRTPI	Director, CPRW
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Mr Michael Bird	Chairperson, BAWT
Mr Roger Wingfield BA MRTPI	BAWT
Mr David Vaughan CBE QC	Lord of the Manor, Llandefalle Common
Mrs Elizabeth Daniel	Director, Brecon Beacons Holiday Cottages Ltd
Mr Gwyn Davies	Caebetran Farm, Llandefalle Common
Dr Laine Skinner	BAWT
Mrs Mary Robinson	Vice-Chairman, Ramblers' Association (Wales)
Mr Michael Rolt	Countryside and Access Officer (Powys), Ramblers' Association

**INTERESTED PERSONS:**

Mrs Anne Nicholls	South Powys Bridleways Officer, British Horse Society, c/o Drysgol, Crickadarn, Builth Wells, Powys LD2 3AQ
Mr Gareth Davies	Cwm Gwilym Farm, Garthbreny, Brecon LD3 9TH
Mrs Jean Jones	Siop Fach, Llandefalle, Brecon LD3 0NU
Mrs Jane Chapelle	Pentwyn Farm, Garthbreny, Brecon LD3 9TW

**APPENDIX 2: DOCUMENTS**

INQUIRY DOCUMENTS	
Doc 1	Attendance Lists for 9 days
Doc 2	Closing Submissions - CPRW
Doc 3	Closing Submissions - Cadw
Doc 4	Closing Submissions – Powys County Council
Doc 5	Closing Submissions – Windjen

*Note: where numbers in the following lists are missing, the absent documents were not referred to and not supplied; the original numbers have been retained to avoid complete re-numbering.*

CORE DOCUMENTS	
CD1	Acts & Statutory Instruments
1.1	The Town And Country Planning (Environmental Impact Assessment) (England & Wales) Regulations 1999
1.2	Ancient Monuments & Archaeological Areas Act 1979 - Extract
1.3	National Parks & Access To The Countryside Act 1949 - Extract
1.4	Countryside And Rights Of Way Act 2000 (Crow Act 2000)
1.5	Environment Act 1995 - Extract
CD2	Welsh Policies And Guidance
2.1	Planning Policy Wales – March 2002 (Not Included)
2.2	TAN (Wales) 8 - Renewable Energy - Nov 1996
2.3	TAN (Wales) 11 - Noise – October 1997
2.4	Minerals Technical Advice Note (Wales) 1: Aggregates, Feb 04
2.5	C60/96: Planning And The Historic Environment Archaeology
2.6	C11/99: Environmental Impact Assessment – July 1999
2.7	Technical Advice Note (Wales) 5 – Nature Conservation and Planning 11/96
2.8	Countryside Access (Provisional & Conclusive Maps)(Wales) Regs 2002
CD3	Development Plan & Other Local Policies
3.1	Powys County Structure Plan (Replacement) Adopted Feb 1996
3.2	Brecknockshire Local Plan - October 1997
3.3	Brecknockshire Local Plan Proposals & Inset Maps – Oct 1997
3.4	Brecon Beacons National Park Local Plan Adopted May 1999
3.5	Powys County Council UDP – Consultation Draft March 2003
	3.5.1 Written Statement
	3.5.2 Proposals And Inset Maps
	3.5.3 Sustainability Appraisal
3.6	Brecon Beacons National Park – Management Plan
	3.6.1 Hobhouse Report 1947 (extracts)
3.7	3.7.1 Montgomeryshire Local Plan Deposit Version, Oct 1995 (extract)
	3.7.2 Montgomeryshire LP (Deposit - Modifications), June 1997 (extract)
CD4	4.0 Extract From Definitive Map Of Public Rights Of Way
	4.1.1-8 CROW Act 2000– Draft Maps, Registered Common Land & Open Country
	4.2.1-8 CROW Act 2000 – Provisional Maps: Reg Common Land & Open Country
	4.3 Definitive Maps Of Public Rights Of Way
CD5	5.0 Register Of Landscapes Of Historic Interest In Wales: Cadw
	5.0.1 Part 2.1 – Landscapes Of Outstanding Historic Interest – 1998
	5.0.2 Part 2.2 – Landscapes Of Special Historic Interest – 2001
	5.0.3 Guide To Good Practice On Using The Register Of Landscapes Of Historic Interest In Wales In The Planning And Development Process
CD6	6.0 Landscape Character Assessment: Countryside Agency & Scot Nat Heritage
CD7	7.1 ‘Guidelines For Landscape & Visual Assessment’ – LI & IEMA 2002



CD8	8.0	Llanddew Village Green – Commons Registration Act 1965
CD9	9.0	Llanddew Castle – SAM: Br057 (Pow)
CD10	10.0	Planning Application
	10.0.1	Application Form
	10.0.2	Details Of Proposal
	10.0.3	Planning Appraisal
	10.0.4	Press Advertisement
	10.0.5	Windjen Letter Of 12 <sup>th</sup> February 2001: Nordex Machines
	10.1	Environmental Statement
	10.1.1	Volume 1 – Non Technical Summary
	10.1.2	Volume 2 - Written Statement
	10.1.3	Volume 3 – Figures
	10.2	Additional Plan: Indicative Grid Connection Route Corridor
	10.3	Typical Cross Section Through Borrow Pit 1: 21 Aug 2000
	10.4	Typical Cross Section Through Borrow Pit 2: 21 Aug 2000
	10.5	Site Layout – Figure 2 – Amended: Received 13 June 2001
	10.6	Consultee Responses
	10.6.1	Brecknock Wildlife Trust
	10.6.2	Brecon Against Wind Turbines
	10.6.3	Brecon Town Council
	10.6.4	Building Control Section
	10.6.5	CADW Welsh Historic Monuments
	10.6.6	Cllr Mrs D G Thomas
	10.6.7	Countryside Council For Wales
	10.6.8	CPAT
	10.6.9	CPRW
	10.6.10	Defence Communication Services Agency
	10.6.11	Defence Estates
	10.6.12	Dyfed Powys Health Authority
	10.6.13	Dyfed Powys Police Authority (Brecon)
	10.6.14	Dyfed Powys Police Authority Headquarters
	10.6.15	Environment Agency Wales
	10.6.16	Environmental Health Department
	10.6.17	Erwood Community Council
	10.6.18	Felinfach Community Council
	10.6.19	Highways, Transport & Property
	10.6.20	Home Office Police Science & Tech Unit
	10.6.21	Honddu Isaf Community Council
	10.6.22	Llanddew Community Council
	10.6.23	Local Plan Section
	10.6.24	NTL
	10.6.25	Orange Pcs
	10.6.26	Powys County Council - A Bull
	10.6.27	R S P B
	10.6.28	Rights Of Way
	10.6.29	The British Horse Society
	10.6.30	The National Park Officer
	10.6.31	The National Trust
	10.6.32	The Ramblers Association
	10.6.33	Welsh Ambulance Services NHS Trust
	10.7	Neighbour/Public Responses (Against)
	10.8	Neighbour/Public Responses (For)
	10.10	Petition – 1297 Signatures

CD11	11.0	Brecknockshire Planning Committee Report – 22 <sup>nd</sup> January 2003
	11.1	Minutes Of Brecknockshire Planning Committee – 22 <sup>nd</sup> Jan 2003
CD12	12.0	Refusal Of Permission For Development Dated 22 <sup>nd</sup> January 2003
	12.1	Grounds Of Appeal
	12.2	12.2.0 Letter Informing Interested Parties – 22 Sept 03
		12.2.1-85 Responses Received By The Planning Inspectorate
CD13		Welsh Affairs Select Committee 1994 Government Response
CD14		Best Practice Guidelines For Wind Energy Development – BWEA
CD15	15.0	Economic Development Committee: Renewable Energy April 2002
	15.1	Economic Development Committee: Energy Policy In Wales, Jan 2002
	15.2	Economic Development Committee: Renewable Energy – Final Paper, Jan03
CD16		English Policy Documents
	16.0	PPG22: Feb 1993 - Renewable Energy: Annex On Wind Energy
	16.1	Draft PPS 7 – Sustainable Development In Rural Areas
	16.2	Draft PPS22: Renewable Energy
CD17		Twyn Y Gaer Hillfort – Extracts from SMR & other documents
CD18		Llandefalle Common –Register Of Commons, Maintained
CD19		Planning For Wind Energy – Guide For Regional Targets: BWEA
CD20		Energy White Paper: Our Energy Future (2003)
CD21		ETSU-R-97: The Assessment And Rating Of Noise From Wind Farms: September 1996
CD22		Inspector’s Pre-Inquiry Meeting Notes – 4 December 2003
CD23		BS7445: Part 1: 1991 Description & Measurement Of Environmental Noise: Guide To Quantities & Procedures
CD24		BS7445: Part 2: 1991 Description And Measurement Of Environmental Noise: Guide To The Acquisition Of Data Pertinent To Land Use
CD25		BS7445: Part 3: 1991 Description And Measurement Of Environmental Noise: Guide To Application To Noise Limits
CD26		BS5228: Parts 1-5: 1997 ‘Noise And Vibration Control On Construction & Open Sites’
CD27		BS7835: Part 1; 1990 ‘Evaluation And Measurement For Vibration In Buildings: Guide For Measurement Of Vibration And Evaluation Of Their Effects On Buildings’
CD28		BS7835: Part 2: 1993 ‘Evaluation And Measurement For Vibration In Buildings: Guide To Damage Levels From Ground borne Vibration’
CD29		BS6472: 1992 Evaluation Of Human Exposure To Vibration In Buildings (1hz-80 Hz)
CD30		BS4142: 1997 ‘Method For Rating Industrial Noise Affecting Mixed Residential & Industrial Areas’
CD31		BS8233: 1999 Sound Insulation And Noise Reduction For Buildings – Code Of Practice’
CD32		BS4142: 1997 Method For Rating Industrial Noise (see CD30)
CD33		BS En 61400-11: 1999 Wind Turbine Generator Systems – Part 11: Acoustic Noise Measurement Techniques.
CD34		Noise Measurements In Windy Conditions ETSUW/13/00386/Rep
CD35		National Assembly Motion – 10 May 2000
CD36		House Of Lords Debate – 13 January 2004
CD37		Site Notice & Felinfach, Llanddew, Garthbreny Community Notice Boards; Brecon & Radnor Express – 29/04/04
CD38		The LANDMAP Information System
CD39		LANDMAP Progress Report
CD40		Inside Wind Turbines – Fixed Vs. Variable Speed
CD41		Existing And Proposed Windfarms In Powys
CD42		National Parks in Scotland
	42.1	Cairngorms National Park
	42.2	Loch Lomond & The Trossachs National Park
CD43		Visual Assessment Of Windfarms: Best Practice – Scottish Natural Heritage 2002
CD44		Statement Of Common Ground
CD45		List of conditions with amendments agreed at Inquiry

LOCAL PLANNING AUTHORITY DOCUMENTS			
LPA.JAE	8.0	Wind Information Needs For Planners – ETSU W/14/00564/Rep	
	9.0	Best Practice Guidelines For Wind Energy Development – BWEA Nov 94	
	12.0	Statement On Behalf Of The National Trust: Chris Lambart	
	13.0	The Potential Impact Of Wind Farms On Tourism In Wales: WTB Oct 03	
	14.0	Video of Original Dummy Run - 18 April 2002	
	15.0	Proof Of Evidence Of Mr Arwyn Evans	
	16.0	Mynydd Clogau, Cwmllywd & Nant Carfan –Appeal Decision May 2002	
	17.0	Cornwall Visitor Summary July 2002 - June 2003	
	18.0	Rebuttal Evidence Of Arwyn Evans	
LPA.AB	1.0	Statement By Alison Brown	
	2.0	Appendices A-L attached to statement of Alison Brown	
	3.0	Summary Of Statement Of Alison Brown	
	4.0	Rebuttal Evidence Of Alison Brown	
	5.0	Nordex N60/N62: Transport, Access Roads & Crane Requirements	
LPA.CCW	1.0	Statement By Ray Woods	
	2.0	Maps 1-7 Attached to evidence of Ray Woods	
	3.0	Summary Of Evidence By Ray Woods	
LPA.JC	1.0	Proof Of Evidence Of Mr John Campion	
	2.0	Appendices 1-16, incl photos of Blaen Bowi wind farm on board – jc05A	
	3.0	Summary Of Evidence Of Mr John Campion	
	4.0	Pathfinder Guide - Brecon Beacons & Glamorgan Walks 2003	
	5.0	Scenic Drives In The National Park - Heritage Guides 1996	
	10.0	“What To See Near The Mountain Centre On Foot” – BBNP 1990	
	11.0	Hobhouse Report Of The National Parks Committee July 1947	
	12.0	Topic Paper 6: Landscape Capacity & Landscape Sensitivity; Swanwick,C; Countryside Agency & Scottish Natural Heritage	
	13.0	Appeal Ref: A/00/1050806: Land At Wogaston Farm, Pembroke	
	14.0	The Brecon Beacons: Altos Explorer Guides, 1992	
	LPA.GR	1.0	Llethercynon Wind Farm Proposal – Report On The Assessment Of Noise – Graham Rock Acoustics’ Report No. En/297/2 – 29 September 2000
		2.0	Llethercynon Wind Farm – Supplementary Report On Environmental Noise: Recommended Noise Targets – Graham Rock En/297/3 Nov 2000
		4.0	Reply To Hayes Mckenzie Report 1275/R3: Report 297/5, GRA 5 Oct01
		6.0	Guidelines For Community Noise – World Health Organisation 1999
7.0		Ten Targets For Tranquility – Draft Bulletin Nnc/07/00, NSCA July 2000	
8.0		Planning Guidance (Wales) Planning Policy – First Revision April 1999	
12.0		A Review of Published Research on Low Frequency Noise And Its Effects – Leventhall G Et Al – Report for DEFRA May 2003	
15.0		Hayes Mckenzie Report Number 1275/R3 Dated 4 March 2001	
16.0		European Directive 2002/49/Ec: 25 June 2002	
21.0		Statement of Evidence of Graham Rock	
22.0		Summary Of Proof Of Evidence Of Graham Rock	
23.0		Environmental Noise Survey – Capel Cynon	
24.0		Enlargement Of Regression Fig 7 From M Hayes Appendix 4	
25.0		Rebuttal Evidence Of Graham Rock	
26.0		Wind Turbines At Night: Acoustical Practice & Sound Research	
LPA.MG		1.0	Proof Of Evidence Of Martin Gregory
	2.0	Summary Of Proof Of Evidence Of Martin Gregory	
	3.0	Summary Of Outstanding Noise Issues	
LPA.BBNP	1.0	Proof Of Evidence Of Ian Roberts	
	2.0	Appendices 1-3 attached to Ian Roberts evidence	
	3.0	Summary Of Proof Of Evidence Of Ian Roberts	

BOND PEARCE DOCUMENTS	
APP1	Reports Of Debates In The Welsh Assembly On Renewable Energy
1.1	Welsh Assembly – 26 February 2003 – Statement On The Energy Programme
1.2	23 November 2000 – The Future Role Of Renewable Energy
1.3	10 May 2000 - Climate Change
1.4	Government Response to 2 <sup>nd</sup> Report of Welsh Affairs Committee: Wind Energy
APP4	Appeal And Call-In Decisions
4.1	Appeal By Border Wind Farms Limited
4.2	Application By The Wind Energy Group - Mynydd Y Cemmaes, Machynlleth
4.3	Powergen Renewables Ltd – Park House Farm, Lowca, Whitehaven
4.4	Western Windpower Ltd – Blood Hill, Winterton-On-Sea, Great Yarmouth
4.5	Cynog Farm, Pendine, Carmarthen
4.6	Western Windpower Ltd – Sputh Denes Industrial Area, Great Yarmouth
4.7	Cumbria Windfarms Ltd – Hilltop Farm, Brockebank, Wigton
4.8	Powergen Renewables Ltd – Land Off Warmer Land, Out Newton
4.9	Windjen Power Ltd – Mynydd Glyn Lws, Betws Yn Rhos
4.10	TXU Europe Power Ltd – Land At Wogaston Farm, Angle, Pembroke
4.11	National Windpower Ltd – Land At Jordanstone, Fishguard, N Pembrokeshire
4.12	TXU Europe Power Ltd – The Old Racecourse, Bratton Fleming
4.13	Renewable Energy Systems Ltd – Mynydd Clogau, Near Adfa, Powys
4.14	National Wind Power Ltd – Wharrel’s Hill, Bothel
4.15	Windjen Power Ltd – Land at Tir Mostyn & Foel Goch, Nantglyn, Denbigh
4.16	Wind Prospect Developments Ltd – Deeping St Nicholas, Spalding
4.17	G Y Mcnay Trust – Wandysteads Farm, Edingham, Alnwick, Northumberland
4.18	West Coast Energy Ltd – Stowford Cross, Bradworthy
4.19	Ecotricity – Land Near Wood Farm, Shipdham
4.20	Community Power Ltd: Ton Mawr Farm, Margam & Castell Farm, Llangynwyd
4.21	Ecotricity – Land At Bamber’s Farm, Mile Lane, Mablethorpe, Lincolnshire
4.22	United Utilities Green Energy - Clowbridge Res’r & New Barn Farm, Burnley
4.23	Roskrow Barton Farm, Roskrow, Penryn, Cornwall
4.24	Higher Darracott, Great Torrington, Devon
4.25	Ecogen, St Breock Downs, Nr, Wadebridge, Cornwall
APP.DS	1.0 Summary Of Proof Of Evidence Of David I Stewart
	2.0 Proof Of Evidence Of David I Stewart
	3.0 Appendices 1-5 of Evidence of David Stewart
	4.0 Rebuttal Evidence Of David Stewart Associates
	5.0 Appeal Decision – High Darracott, Great Torrington, Devon
6.0	6.1 Windfarms Approved Close To National Parks In England And Wales
	6.2 Windfarms Refused Close To National Parks In England And Wales
	6.3 Table 4.1 Installed Wind Farm Capacity Worldwide 2003/2004
	7.0 European Member States’ National Indicative Targets By 2010
APP.MDH	1.0 Summary Proof Of Evidence Of Malcolm D Hayes
	2.0 Proof Of Evidence Of Malcolm D Hayes
	3.0 Appendices 1-6 of Evidence of M D Hayes [2 Volumes]
	4.0 Appendix 6 (Revised)
	5.0 Health Effect-Based Noise Assessment Methods: Review & Feasibility, Sept 98
	6.0 Low Frequency Noise: West Mill Wind Farm, Watchfield – Leventhall Mar 04
	7.0 Predicted External A-Weighted Low Frequency Noise Level : Nordex N-60
	8.0 Llethercynon Windfarm: Noise Levels using WHO night time criterion
	9.0 Llethercynon Windfarm: Foundation Removal Predicted Noise Levels
	10.0 Existing/Predicted Noise Levels
	11.0 Threshold Levels After Watanabe & Moller (1990b)
	12.0 Appendix C : Regression Analysis of Noise & Wind Data – Blaen Bowi

APP.KH	1.0	Summary Of Evidence Of Kay Hawkins
	2.0	Proof Of Evidence Of Kay Hawkins
	3.0	Figures To Proof Of Evidence Of Kay Hawkins
	4.0	Appendices To Proof Of Evidence Of Kay Hawkins 1 – 9
	5.0	Supplementary Evidence Of Kay Hawkins, Appendices 10, 11 & 12
	6.0	Supplementary Information Of Kay Hawkins
	6.0.1	List Of Wire Frame Locations
	6.0.2	Twyn Y Gaer Photos
	6.0.3	Site Layout & Definitive Rights Of Way
APP.DC	1.0	Letter from Bond Pearce dated 14 May 2004: Transportation of Turbines to Site
	2.0	Letter from Windjen Dated 9 <sup>th</sup> May 2001: Traffic Management
	3.0	Trailer Bed Height/Width Sketch Scale 1:35
	4.0	Collett Transport – Route Access Report Number 79601
	5.0	Map Showing Parc Cynog Location
	6.0	Parc Cynog Turbines Update – 27 <sup>th</sup> May 2004
<b>CADW DOCUMENTS</b>		
CADW.SR	1.0	Summary Of Statement Of Evidence Of Dr Sian Rees, Cadw
	2.0	Statement Of Evidence Of Dr Sian Rees, Cadw
	3.0	Appendices Cadw 01 – 05
	3.1	Scheduling Documents, Photos & Surveys Of Twyn-y-Gaer
	3.2	Rcahmw Measured Survey Of Twyn Y Gaer 1986
	3.3	Ancient Monuments And Archaeological Areas Act 1979
	3.4	Report of Margam Public Inquiry
	3.5.1	Photomontage – Viewpoints E & D From ES
	3.5.2	Photographs of Twyn-y-Gaer hill fort SAM
	3.6	Viewpoints For Sian Rees & Kay Hawkins
3.7	Guide To Ancient And Historic Wales – Clwyd & Powys By Helen Burnham (Extracts)	
<b>CPRW COALITION DOCUMENTS</b>		
CPRW.PO	1.0	Peter Ogden – Director, CPRW
CPRW.GS	2.0	Geoffrey Sinclair – Policy Proof of Evidence
CPRW.MB	3.0	Mike Bird – Brecon Against Wind Turbines (Bawt)
CPRW.MB	3.1	Portrait Of The Brecon Beacons (P120) E J Mason. Robert Hale 1975
	3.2/3.3	Modernising Local Government (9/2/98) DETR
	3.4	Regeneration Through Culture, Sport And Tourism: DETR Nov 2000
CPRW.RW	4.0	Roger Wingfield – Local Landscape & Appendix A
CPRW.DV	5.0	David Vaughan QC – Llandefalle Common
	5.1	Holidays On Horseback in the Radnor Hills & Cambrian Mountains
CPRW.ED	6.0	Mrs Elizabeth Daniel – Tourism
CPRW.GD	7.0	Gwyn Davies – Local Farm-Based Tourism
CPRW.LS.	8.0	Dr Laine Skinner – Landscape and Visitor Survey
CPRW.GS	9.0	Geoffrey Sinclair – Landscape and Miscellaneous
	9.0a	Blaen Bowi ES (extract)
	9.0b	Parc Cynog ES (extract)
CPRW.MR	10.0	Mary Robinson – Ramblers Association
CPRW.ROLT	12.0	Michael Rolt – Statement By Ramblers' Association, Powys Area
<b>OTHER INTERESTED PERSONS DOCUMENTS</b>		
OIP	1.0	Mrs Sian Gregory, Ty Canol, Pwllgloyw, Brecon – Letter dated 28 May 04
	2.0	Mr Gareth Davies, Cwmgwilym Farm - Statement (undated)
	3.0	Open Spaces Society – Statement Dated 11 May 2004
	4.0	Extract from 'Shooting Times & Country Magazine' 27 May 04 - Mrs Chappelle