

Adroddiad

Ymweliad â safle a wnaed ar 22/06/17

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Arolygydd a benodir gan Weinidogion Cymru

Dyddiad: 27/07/2017

Report

Site visit made on 22/06/17

by Kay Sheffield BA(Hons) DipTP MRTPI

an Inspector appointed by the Welsh Ministers

Date: 27.07.2017

TOWN AND COUNTRY PLANNING ACT 1990
SECTION 78
APPEAL BY PANT Y MAEN WIND LIMITED
FOR
CONSTRUCTION AND OPERATION OF WIND FARM
ON LAND ADJACENT TO LLYN BRAN, BYLCHAU, DENBIGH, DENBIGHSHIRE

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Glossary

AIL	Abnormal Indivisible Load
AONB	Clwydian Range and Dee Valley Area of Outstanding Natural Beauty
BWF	Brenig Wind Farm
CFWF	Clocaenog Forest Wind Farm
CMS	Construction Method Statement
CPAT	Clwyd Powys Archaeological Trust
CPRW	Campaign for the Protection of Rural Wales
CR&DVMP	Clwydian Range and Dee Valley Management Plan 2014-2019
CTMP	Construction Traffic Management Plan
DCC	Denbighshire County Council
DE085	Bwlch-Du Round Barrow
DE087	Circular Platforms northwest of Hen Ddinbych
DE100	Rhiwiau Round Barrow Cemetery
DE157	Round Cairn 648m northeast of Tan-Y-Foel
DE168	Gorsedd Bran Round Barrows
EN-1	National Policy Statement for Energy
EN-3	National Policy Statement for Renewable Energy Infrastructure
ES	Environmental Statement
GBWF	Gorsedd Bran Wind Farm
LDP	Denbighshire Local Development Plan
LHI	Landscape of Historic Interest
NPS	UK Government National Policy Statements
NRW	Natural Resources Wales
NSIP	Nationally Significant Infrastructure Project
PPW	Planning Policy Wales
RSM	Rationale for Scheme Modification
RVAA	Residential Visual Amenity Assessment
SAM	Scheduled Ancient Monuments
SEI	Supplementary Environmental Information
SLR	SLR Consulting Limited
SNP	Snowdonia National Park
SPG	Denbighshire Renewable Energy Supplementary Guidance Note
SSA	Strategic Search Area
SSSI	Site of Special Scientific Interest
TAN	Technical Advice Note
The 1990 Act	Town and Country Planning Act, 1990
TMP	Traffic Management Plan
TMWF	Tir Mostyn/Foel Goch Wind Farm
UDP	Denbighshire Unitary Development Plan
WG	Welsh Government
ZTV	Zone of Theoretical Visibility

File Ref: APP/R6830/A/17/3171058

Site address: Land adjacent to Llyn Bran, Bylchau, Denbigh, Denbighshire

- 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 Pant y Maen Wind Limited against the decision of Denbighshire County Council.
- The application Ref 25/2015/0321, dated 26/03/2015, was refused by notice dated 14/09/2016.
- The development proposed is the construction and operation of a wind farm comprising seven wind turbines together with transformers, access tracks, on-site substation, anemometry tower and associated construction and operational infrastructure.

Summary of Recommendation: The appeal be dismissed

Procedural Matters

1. Regulation 4 of the Developments of National Significance (Specified Criteria and Prescribed Secondary Consents) (Wales) (Amendment) Regulations 2016 specifies the construction of an on-shore wind generating station that is expected to have (when constructed) an installed generating capacity of 10 megawatts or above is of national significance. The appeal proposal falls within this category and the appeal was recovered for determination by the Welsh Ministers by letter dated 19 May 2017.
2. The application was accompanied by an Environmental Statement (ES) which was subsequently updated by the submission of Supplementary Information (SEI) Volumes 1 and 2 together with a Non-Technical Summary and a Rationale for Scheme Modification (RSM). The ES and the supplemental information have been confirmed as containing the level of information identified in Parts I and II of Schedule 4 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 and being complete for the purposes of those Regulations.
3. At the time the Council made its decision on the application edition 8 of Planning Policy Wales (PPW) was the relevant Welsh Government (WG) statement of national planning policy and guidance. Edition 9 of PPW was issued in November 2016. Both parties have had reference to this edition in the appeal submissions and it is with regard to edition 9 that my recommendation is made.
4. Whilst the parties have cited in evidence WG Circular 60/96: Planning and the Historic Environment: Archaeology, it was cancelled by the publication in May 2017 of Technical Advice Note (TAN) 24: The Historic Environment. The parties have been given the opportunity to comment on the consequences this has had for the cases submitted in respect of the appeal and the comments made have been incorporated into this report.
5. When I made my accompanied site visit on 22 June 2017 the poor weather conditions prevented me from seeing the site from surrounding viewpoints. I therefore made unaccompanied visits on 25 and 26 June when visibility was good.

The Site and Surroundings

6. The site is located on forested land approximately 10km southwest of Denbigh, 15km west of Ruthin and 16km east of Llanrwst. The villages of Bylchau and Nantglyn lie approximately 3.5km to the north and 4km to the northeast respectively and the settlement of Waen lies approximately mid-way between the two. The settlement of Soar is approximately 3km to the northeast of the site. The Llyn Bran reservoir is situated adjacent to the western section of the site and Llyn Brenig lies to the south. The B4501 runs close to the western and southern boundaries of the site and the A543, which defines the boundary of the Council's area, lies to the north. There are

various properties scattered across the local area, the nearest being Cwm y Rhinwedd approximately 0.9km to the northwest of the nearest proposed turbine and The Sportsman's Arms approximately 1.25km to the west. Whilst this property is not currently open as a public house it is occupied on a residential basis.

7. The site stretches over 2km from north to south and east to west and at its highest point the land is 518m above sea level. It lies within but close to the northwest boundary of the Clocaenog Forest Strategic Search Area (SSA-A) as defined in TAN 8: Planning for Renewable Energy. Although the site is not within a statutory landscape designation, Snowdonia National Park (SNP) at its closest point lies approximately 12km to the west and the Clwydian Range and Dee Valley Area of Outstanding Natural Beauty (AONB) is approximately 6km to the east. The Mynydd Hiraethog Landscape of Historic Interest (LHI) bounds the site to west and south and there are various heritage assets scattered across the area. The nearest to the site is the Scheduled Ancient Monument (SAM) Gorsedd Bran Round Barrows (DE168) which lies a short distance to the northeast. Also within the surrounding area is the Mynydd Hiraethog Site of Special Scientific Interest (SSSI).
8. There are several operational wind farms within the vicinity of the appeal site detailed in the evidence which include:
 - Tir Mostyn/Foel Goch (TMWF) approximately 4.5km to the southeast of the appeal site. Permission was granted in 2002 for 25 turbines with a blade tip height of 75m;
 - Hafoty Ucha lies approximately 14km to the south and comprises 4 turbines with blade tip heights of between 60m and 86m;
 - Wern Ddu located approximately 14km southeast of the site and consisting of 4 turbines with maximum blade tip height of 90m;
 - Braich Ddu lies approximately 19km to the south and includes 3 turbines, each with a blade tip height of 90m;
 - Approximately 1.5km to the northeast of the site is the single turbine at Wern Uchaf which measures 27m to blade tip; and
 - Moel Maelogen and Moel Maelogen II lie approximately 12km to the west of the site and comprise 3 and 9 turbines respectively with blade tip heights of 76m.
9. There are also several consented schemes in the area which include:
 - Brenig (BWF), 2.7km east of site, was granted permission by the Council in 2008 and is currently under construction. The original permission allowed 16 turbines with a maximum tip height of 100m. Whilst an extension of the height of the turbines to 110m was granted on appeal in 2016, it is understood the developer is implementing the original permission and construction is expected to be completed within twelve months;
 - Derwydd Bach, approximately 11km southeast of the site with consent for 10 turbines with maximum blade tip height of 120m. Whilst work has commenced on site it is understood that the scheme will not come forward in the short term;
 - Clocaenog Forest (CFWF) approximately 6.5km southeast of the site. A Development Consent Order was granted in 2014 for 32 turbines with a maximum blade tip height of 145m. It is expected to come forward in the next year;
 - Nant Bach approximately 12km south of the site with consent for 11 turbines with a maximum blade tip height of 100m. Although the promoter has confirmed that it is not progressing with the scheme, it does not preclude another developer taking the site forward in the future; and
 - Hafodty Du, a single turbine approximately 4km east of the site with a blade tip height of 81m.

10. There are also the operational off-shore wind farms of Rhyl Flats, North Hoyle and Gwynt y Môr which lie in excess of 30km to the north and total 215 turbines with blade tip heights of 107m and 133.5m.

Planning Policy

Local Policy

11. The statutory development plan is the Denbighshire Local Development Plan 2006-2021 (LDP) which was adopted on 4 June 2013. The policies of the LDP cited by the Council in its decision to refuse planning permission are summarised below¹.
12. Policy VOE 1 protects certain areas from development that would adversely affect them. Proposals should maintain and, wherever possible, enhance these areas for their characteristics, local distinctiveness and value to local communities in Denbighshire. Of relevance to the appeal are the effects on SAM and the AONB.
13. Policy VOE 2 states that in determining development proposals within or affecting the AONB, development that would cause unacceptable harm to the character and appearance of the landscape and the reasons for designation will not be permitted. The explanation of the policy indicates that consideration will be given to both the impact within the AONB and the impact of development on the setting of the AONB. It also states that important views to and from the AONB will be protected.
14. Policy VOE 9 supports on-shore wind turbine developments subject to an assessment of their environmental and sustainability impacts. The appeal proposal falls within the 'Local Authority-wide' scale of development as defined in the policy. These will only be supported within SSA-A where they do not prejudice the development of strategic large scale schemes and where they do not affect the setting of amongst others the AONB and other sites designated for ecological, historic, landscape or other value. The policy also states that all proposals will be subject to normal environmental impact tests and include specific assessment and explanation of a number of criteria. Of relevance to the appeal is criterion ii) which refers to impacts, including cumulative impact, on the surrounding area and community, for example landscape and visual impact.
15. In April 2016 the Council adopted its Denbighshire Renewable Energy Supplementary Guidance Note (SPG)². The overarching objective of the SPG is to assist the consideration of LDP Policies VOE 9 and VOE 10 which outline the primary objectives for assessing renewable energy developments under 50MW.

National Policy

16. No significant changes to the previous content were made in edition 9 of PPW with regard to sections relevant to the appeal, with the exception of Section 6: The Historic Environment. However, this section continues to stress the need to conserve archaeological remains and confirms in paragraphs 6.5.5 that the conservation of archaeological remains is a material consideration in determining a planning application, whether those remains are a scheduled monument or not. It also states that "*It will only be in exceptional circumstances that planning permission will be granted if development would result in an adverse impact on a scheduled monument (or an archaeological site shown to be of national importance) or has a significantly damaging effect upon its setting. In cases involving less significant archaeological*

¹ Full copies in Appellant's Bundle 2.B Tab 4

² DCC Document 12

remains, local planning authorities will need to weigh the relative importance of the archaeological remains and their settings against other factors, including the need for the development”.

17. It goes on to note in paragraph 6.5.6 that the amount of information and analysis of the archaeological significance of a site should be proportionate to the potential impact that the proposal has on the significance of the archaeological remains and sufficient to determine the extent of this impact. If this information is not provided to an appropriate standard, local planning authorities should consider whether it is necessary to request the applicant to supply further information, or to refuse permission for an inadequately documented proposal.
18. Section 12.8 of PPW 9 highlights the UK target of 15% of energy from renewables by 2020 and the WG’s commitment to deliver this. Paragraph 12.8.2 states that *“Planning policy at all levels should facilitate delivery of both the ambition set out in Energy Wales: A Low Carbon Transition, and UK and European targets on renewable energy”*. Local planning authorities are required by paragraph 12.8.9 to facilitate the development of all forms of renewable and low carbon energy to move towards a low carbon economy to help tackle causes of climate change. At the same time paragraph 12.8.10 expects local planning authorities to *“ensure that international and national statutory obligations to protect designated areas, species and habitats and the historic environment are observed”*.
19. Paragraph 12.8.12 of PPW 9 recognises that in the short to medium term, wind energy continues to offer the greatest potential (for activities within the control of the planning system in Wales) for delivering renewable energy. Wales has an abundant wind resource and power generation using this resource remains the most commercially viable form of renewable energy. It is also accepted that the *“introduction of new, often very large structures for onshore wind needs careful consideration to avoid and where possible minimise their impact. However, the need for wind energy is a key part of meeting the Welsh Government’s vision for future renewable electricity production as set out in the Energy Policy Statement (2010) and should be taken into account by decision makers when determining such applications”*.
20. TAN 8 supports large scale wind developments within SSA. Although it sets out indicative targets of installed capacity for each SSA these are intended to assist the planning process and are not to be seen as the definitive capacity for the area. There may be technical and/or environmental reasons why the capacity may be more or less than indicated. The target given for SSA-A³ is 140MW. However, the Minister’s letter of July 2011⁴ reviewed the capacities of the SSA and the maximum installation capacity for SSA-A was confirmed at 212 MW. This figure is cited in the SPG. An implicit objective of TAN 8 is to accept landscape change i.e. a significant change in landscape character from wind turbine development within (and immediately adjacent to) SSA.
21. The TAN 8 Database 2016 – Review of On-Shore Wind Farm Development was issued by WG in January 2017. It provides a summary by SSA of on-shore wind farm schemes over 5 MW in Wales which are being considered, have been approved or are operational as at 1 April 2016. The summary distinguishes between schemes below and above 50 MW and also separates schemes which have been operational prior to or since the publication of TAN 8 in 2005. The potential total for SSA-A is recorded as

³ TAN 8, page 5, Table 1

⁴ Letter from John Griffiths AM Minister for Environment and Sustainable Development to Chief Planning Officers (Appendix A to Appellant’s final comments)

237 MW of which 29.5 MW is operational, 186.5 MW is consented and 20 MW is awaiting determination. Whilst the database was not referred to in evidence, the parties had the opportunity to consider its contents in relation to the cases submitted and the comments received have been taken into account in this report.

22. TAN 24 provides specific guidance on how aspects of the historic environment should be considered in the determination of planning applications. In respect of heritage impact assessments, it states in paragraph 1.15 that these should be proportionate both to the significance of the historic asset and to the degree of change proposed, and should include sufficient information to enable both the significance of the asset and the impact of the change to be understood.
23. In respect of the setting of an asset TAN 24 confirms in paragraph 1.25 that "*The setting of an historic asset includes the surroundings in which it is understood, experienced and appreciated. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance, or may be neutral. Setting is not a historic asset in its own right but has value derived from how different elements may contribute to the significance of a historic asset*". It goes on in paragraph 1.27 to state that factors which may affect the setting of an historic asset include: intervisibility with other historical or natural features, tranquillity, noise or other potentially polluting development though it may have little visual impact.
24. When considering development proposals that affect scheduled monuments paragraph 4.2 of TAN 24 states that "*there should be a presumption in favour of their physical preservation in situ, i.e. a presumption against proposals which would involve significant alteration or cause damage, or would have a significant adverse impact causing harm within the setting of the remains*".
25. A judgement has to be made over whether a proposed development may be damaging to the setting of the historic asset, or may enhance or have a neutral impact by removing existing inappropriate development or land use. Paragraph 1.9 of TAN 24 recognises the multiple impacts of climate change on historic assets as a particular challenge. One of the measures that need to be taken in response to the impact of climate change is identified as renewable energy projects. It goes on to state that the public benefit of taking action to reduce carbon emissions, or to adapt to the impact of climate change, should be weighed against any harm to the significance of assets.
26. Further guidance is given in WG document "Setting of Historic Assets in Wales", 2017. Section 4.2 states "*the setting of a historic asset is made up of: its current surroundings; our present understanding and appreciation of the historic asset; and what (if anything) survives of its historic surroundings*". It also confirms that setting does not depend on public rights of way or current ability to access the asset or viewpoints, though these can contribute to the significance of a historic asset and its setting. Likewise, the number of visitors to a site or viewpoint does not affect the importance of the setting.
27. UK Government National Policy Statements (NPS) set out the planning policy context for nationally significant infrastructure projects which are subject to the Planning Act 2008 regime. The overarching NPS for energy (EN-1) and NPS for Renewable Energy Infrastructure (EN-3) state that they are likely to be material considerations in decision making in respect of applications that fall under the Town and Country Planning Act 1990 (the 1990 Act).

Planning History

28. The appeal site partially overlaps with an earlier application⁵ for a wind farm at Gorsedd Bran (GBWF). The proposal comprised 13 turbines with a maximum blade tip height of 125m. The GBWF site boundary was larger than the current appeal and included areas of forestry on higher land to the east and northeast, closer to Nantglyn. The application was refused by the Council in 2008 on grounds of landscape and visual amenity, noise, potential flooding from tree felling and inadequate surveys to assess the effects on protected species. The subsequent appeal⁶ was dismissed in 2009 and although the Inspector's decision was initially quashed in the High Court, it was subsequently upheld by the Court of Appeal.
29. The Inspector concluded that there would be unacceptable landscape and visual impacts which were in conflict with planning policy and the harm would not be outweighed by the benefits of renewable energy. In respect of landscape and visual effects the Inspector considered that the cumulative effect of the proposal with existing and consented turbines would result in the local community having the appearance of becoming increasingly surrounded by turbines on all the high ground to the south and west⁷. He also concluded that the turbines would be directly in line with and break the skyline on either side of Snowdon, an impact he considered unacceptably harmful⁸. Concern was also expressed with regard to the cumulative increase in noise. The proposal lay to the west and southwest of the dwelling most affected by the noise from TMWF which meant that the prevailing wind would introduce additional noise to dwellings when they might expect not to hear the existing turbines.

The Proposals

30. The proposed development comprises the construction and operation of a 7 turbine wind farm together with associated transformers, access tracks, on site sub-station, an anemometry tower, three borrow pits and associated construction and operational infrastructure. The application was originally submitted for 8 turbines. However, during the course of the application, the scheme was amended by the removal of one turbine (T6) and the layout was revised accordingly.
31. The turbines would have a maximum blade tip height of 102m with a potential total capacity of 17.5 MW. The elevational details indicate a hub height of 60m and a rotor diameter of 84m. The 60m high anemometry tower would have a lattice design. Access into the site would be from the B4501 approximately 400m from its junction with the A543. The site is currently a combination of existing and recently cleared forest. Whilst planting would remain on the southwestern section of the site, the rest of the site would be clear felled and returned to and managed as heathland.

The Case for Denbighshire County Council

32. The Council's case is set out in the submitted statement of case. Whilst no final comments were submitted, a response to my request for consideration of the publication of TAN 24 and TAN 8 Database 2016 – Review of On-Shore Wind Farm Development was received and has been taken into account. The material points are set out below:

⁵ Application Ref: 25/2007/0642 (DCC Document 5)

⁶ Appeal Ref: APP/R6830/A/08/2074921 (DCC Document 7)

⁷ Paragraph 15

⁸ Paragraph 19

33. The Council is fully appreciative of WG support for renewable energy development. This is reflected in the policies of the LDP and the number of permissions granted for turbines within and on the periphery of SSA-A, particularly to the south and southeast of the appeal site. The Council is equally aware of its responsibilities to ensure due account is taken of the localised effects of development. Nevertheless, in respect of the appeal proposal the Council considers there would be specific landscape and visual impacts together with harm to the historic environment which should be accorded significant weight in the determination of the appeal.

Target Capacities for SSA-A

34. Whilst the Council initially considered that the capacity target for SSA-A was 140 MW as set out in TAN 8, it subsequently acknowledged that in the Minister's letter the maximum installation target was confirmed as 212 MW. Nevertheless, based on the TAN 8 Database 2016 which indicates a total capacity target of 237 MW, the Council was of the opinion that the revised target figure would be exceeded.
35. Of the schemes included in the consented capacity target figure, it was anticipated that the CFWF (96 MW) would come forward in the next year and BWF (48 MW) would be built out within twelve months. The Council had previously been of the opinion that both wind farms at Derwydd Bach (23MW) and Nant Bach (27.5 MW) would be unlikely to come forward. However, the Council indicated that Derwydd Bach was not expected to come forward in the short term and it had been confirmed that the developer was not taking the Nant Bach scheme forward. Nevertheless, the Council considered that this did not preclude another developer from doing so in the future.
36. Notwithstanding its conclusion on capacity, the Council confirmed that in determining the application it had accepted the principle of a wind farm in this location and weight was attributed to the contribution the proposal would make towards national renewable energy generation targets. However, the benefits of the scheme in terms of increased renewable energy generation were not considered to outweigh the adverse impacts on landscape and visual amenity and cultural heritage. The Council did not consider that the TAN 8 Database 2016 impacted on or diminished its case.

Gorsedd Bran Appeal Decision

37. The Council refused permission for the GBWF on the basis of specific land use impacts. The subsequent Inspector's decision on the appeal provided significant support for the Council's concerns regarding landscape and visual and noise impacts on the locality. The Council is of the opinion that the GBWF appeal decision is of direct relevance to the appeal and that it remains a significant material consideration to which significant weight should be afforded in the determination of the appeal. The Council accepted that there have been national and local policy changes and additional developments consented within SSA-A since the appeal decision was issued, most significantly the CFWF. Nevertheless the Council did not consider that these matters diminished the validity and relevance of the appeal decision or the reasons the Inspector came to his conclusions on the landscape and visual amenity impacts which took account of BWF and likely turbines at CFWF⁹.
38. TAN 8 was in place prior to the GBWF decision which had full regard to the location of the site within SSA-A. The various editions of PPW published since the GBWF decision have continued to set out strategic support for renewable energy developments in

⁹ Inspector's decision paragraph 18

principle and direct large scale wind farm schemes to SSA. However, national policy does not make exceptional provision for wind farm developments to be permitted irrespective of whether they would result in an unacceptable detrimental impact on protected landscapes, visual and residential amenity, or on the historic environment.

39. The GBWF decision was made in relation to the former Denbighshire Unitary Development Plan (UDP), whereas the application subject of the current appeal was considered in the light of the LDP. However the main thrust of the LDP policies relating to landscape, visual amenity and the historic environment and to wind farms does not significantly differ in scope or content from the equivalent policies in the UDP, requiring the same basic consideration of the principle of renewable energy development and weighing up the benefits against local impacts.

Landscape and Visual Amenity

40. The Council's concerns in respect of visual amenity centre on the effect the proposal would have on views of the Snowdon Horseshoe when viewed from the Jubilee Tower at the summit of Moel Famau in the AONB. The Council considered that the view of Snowdonia, and in particular the main peaks which constitute the Snowdon Horseshoe¹⁰, to be a significant one for visitors to Moel Famau. The impact of the appeal proposal on the enjoyment of that view from the main peak within the AONB is a consideration which should be given significant weight in determining the appeal.
41. The Council confirmed that it had considered two documents submitted by the Appellant in its appeal submission, namely a plan comparing the size and location of the appeal site with the GBWF scheme and a wire-line drawing showing the horizontal spread of both schemes¹¹. In the light of these documents the Council accepted that the proposed turbines would not interrupt views of Snowdon itself. However, it considered the wire-line drawing illustrated that at least three of the turbines would encroach into views of the Snowdon Horseshoe and be visible against the backdrop of Y Lliwedd. The wire-line also showed that the proposal would extend the windfarm landscape further north beyond the limit of CFWF. This would result in the Snowdonia Mountains appearing to be 'fenced in' by windfarm development, which would be detrimental to the setting of the statutory landscape.
42. The Council did not accept the conclusions reached by the Appellant with regards to the significance of the effect on visual amenity from the top of Moel Famau or that there was a fundamental difference between the impacts of the GBWF scheme and the appeal proposal. The Council considered that the latter would be seen as a separate and distinctive visual element in the view of the Snowdon Horseshoe, impacting adversely on that view. Whilst the impact on Snowdon itself would be reduced compared with the GBWF scheme, the turbines of the appeal proposal would still appear as a visual distraction to the view of one of the main peaks defining the Snowdon range. It would devalue that vista and result in an unacceptable degree of harm to a view of acknowledged importance.
43. The Council accepted that the turbines of the CFWF would dominate the view west from Moel Famau. However, it opined that the Inspector in reaching his decision on the GBWF scheme had concluded that the CFWF would be within the angle of view of TMWF or further to the south of the larger Snowdonia peaks. The key view for many walkers is towards Snowdon and not to the south of that range in the direction of the CFWF.

¹⁰ consisting of the four peaks of Snowdon, Garnedd Ugain, Crib Goch and Y Lliwedd

¹¹ Appellant's Bundle 3.B Tabs 1 and 2

44. The Council was of the opinion that the proposed turbines would be clearly visible against the backdrop of the Snowdon Horseshoe and would harm views of what is a nationally significant feature in the SNP. This would be detrimental to the enjoyment of views out of the AONB. The Council did not consider that the proposal overcame the concerns set out in the GBWF appeal decision and maintained that the development conflicts with test ii) of Policy VOE 9 and Policy VOE 2 of the LDP. In reaching this conclusion the Council had taken account of the views of its landscape consultants together with the history of the site and the specific concerns of the GBWF appeal decision regarding the views from Moel Famau.

Residential Amenity

45. The Council clarified the two threads to its second reason for refusal: the visual impact of the proposal on the occupiers of individual properties; and the impact on the local community which it defined as the individual properties and settlements in the area covered by Waen, Soar and Nantglyn.

46. In his decision on the GBWF scheme the Inspector¹² commented that when turbines are too close, the height, size of swept area and relative elevation of the turbines is such that they appear unacceptably overbearing when viewed from a dwelling or its immediate surroundings. The Inspector also noted¹³ that some visual impact of such large turbines is inevitable, and one of the consequences of the SSA is that such impacts are likely to be concentrated in specific areas and there was therefore a need to assess when the visual impacts became unacceptably harmful.

47. The Inspector referred to 10 named properties¹⁴, including The Sportsman's Arms, from where views of the turbines would be such that their presence would be overbearing. He commented that "*The cumulative effect of the proposal together with the existing and consented turbines would result in the local community having the appearance of becoming increasingly surrounded by turbines on all the high ground to the south and west, in conflict with relevant planning policy*". The Council considered that the Inspector's decision set out clear principles for the consideration of impacts on residential visual amenity from a wind farm development in this location and which remained relevant to the current appeal.

48. The Council accepted that the reduction in the height and number of turbines proposed would help reduce the physical impact of the development compared to the GBWF scheme. Nevertheless the Council was of the opinion that the development would still comprise large structures on an exposed hilltop location and given the extent to which they would be visible from properties in the vicinity of the site, the development would appear overbearing. The development would also stretch the existing and consented turbine landscape further towards the northwest extremity of SSA-A. The Council considered there would not be any significant reduction in terms of the impact of the proposal on the surrounding local community from that identified by the Inspector in respect of the GBWF scheme.

49. With regard to the effect of the proposal on individual properties, the Council considered the effect on The Sportsman's Arms would be of some significance. It had been listed in the GBWF appeal decision as one of ten properties which would experience an unacceptable overbearing impact. The nearest turbine would be

¹² Paragraph 10

¹³ Paragraph 12

¹⁴ Paragraph 14

approximately 1.25km from the property which was closer than in the GBWF scheme where the nearest would have been 1.43km away. Furthermore, all seven of the proposed turbines would be visible from it. The Council noted that the owners of the property have a financial interest in the scheme. However, it does not consider that this is sufficient to justify a development which would have an unacceptably overbearing impact on the residential amenity of the occupiers of the property.

50. The Council accepts that from the properties Rhiwiau and Awel y Brenig, sited to the northeast of the site, five of the proposed turbines would be visible and from three other properties one or two turbines would be seen. The number of properties within 2km of the site which would have views of the turbines would therefore total six. Although the number affected may be less than in the GBWF scheme, the Council did not consider that the proposal had lessened the impacts on these properties to the extent that it could reasonably be concluded that the development would not be unacceptably overbearing.
51. In respect of the CFWF, the Examining Inspector¹⁵ had found the adverse impact on the residential amenity of three properties to be particularly harmful but it was outweighed by national policy in favour of the project. However, the Council did not consider that decision should be accorded any weight in the current appeal for several reasons. The CFWF is a Nationally Significant Infrastructure Project (NSIP) subject to the Planning Act 2008 and primarily assessed against NPS whereas the appeal is subject to the 1990 Act. Whilst NPS can be a material consideration in its determination, the Council considered they do not outweigh WG and local planning policy or other material considerations such as the planning history of the site.
52. Furthermore the scale of the CFWF is significantly greater than the appeal proposal in terms of potential capacity and the weight that can be afforded to the wider public interest in the planning balance is materially different. In the report on the CFWF the Examining Inspector found¹⁶ that the "*wider public interest marginally outweighs the risk of harm to residential amenity*". The Council was troubled by the proposition that it is acceptable for windfarm proposals which would clearly have an adverse impact on the amenity of nearby residents to the extent that the dwelling would become an unattractive place to live would be considered to be an appropriate form of development without any mitigation or compensation proposed.
53. The ES confirms the wide area from which the proposed turbines would be visible and there are properties within and outside the 2km study area which would be impacted by them. The Council had concerns regarding the effect of the appeal proposal on residential amenity and in particular considered that the effect on the occupants of The Sportsman's Arms would be significant and adverse. The Council concluded that the impact of the scheme together with the existing and consented turbines would result in the local community having the appearance of becoming increasingly surrounded by turbines on all the high ground to the south and west, in conflict with Policy VOE 9 (ii) of the LDP.

Historic Environment

54. The Council's concerns are restricted primarily to the effect of the development on the setting of a number of SAM in the area which, when considered alongside other existing and consented schemes, would give rise to significantly cumulative adverse

¹⁵ Appellant's Bundle 1.A Tab 6

¹⁶ Paragraph 8.47

impacts on the setting of these prehistoric funerary and ritual monuments. The Council noted the revisions made to the scheme during the application process and that neither the Clwyd Powys Archaeological Trust (CPAT) nor the County Archaeologist raised objections to the revised proposals. However, as Cadw has the primary role for the determination of the impact of the development on SAM neither party commented directly on those considerations. Furthermore it is the Council's view that the comments made by Cadw on the proposal should be given considerable weight in assessing the acceptability of the proposals.

55. Cadw expressed significant concerns over the original scheme for 8 turbines and maintained its concerns over elements of the revised scheme subject of the appeal. The Council acknowledged that clear differences remain over the adequacy of the information on which to base a conclusion regarding the significance of the impact of the proposal on the setting of the SAM in the vicinity of the appeal site. Cadw was of a view that the submitted information appeared contradictory and confusing, comprising several different reports and latterly a series of photomontage with no commentary. The latest report considered the change in impact on the setting of the monuments by the removal of one turbine, rather than the impact of seven turbines. Cadw recommended the resubmission of the cultural heritage chapter of the ES prepared for a seven turbine development. The Appellant did not accept the recommendation and sought the determination of the application on the submissions already made.
56. Cadw's responses on the application provided the Council with clear guidance that the proposal would give rise to harm to the historic environment. The specific harm identified was the significant adverse impact on the setting of identified SAM and that when considered alongside other existing and consented schemes in the area, such impacts would be likely to constitute a significantly adverse impact on the settings of the prehistoric funerary and ritual monuments within the landscape. Cadw was unable to reassure the Council that the submitted information demonstrated the development would not have a significant adverse impact on the setting of the SAM and there was no new information in the Appellant's evidence which countered this concern.
57. The Council was therefore of the opinion that the development would give rise to unacceptable impacts on the settings of the SAM, in conflict with Policy VOE 1 of the LDP and the policies and guidance in PPW and TAN 24.

Noise

58. The Council expressed concerns regarding the cumulative noise effects on residential properties in the vicinity of the site. It considered that there was a need to manage noise through the imposition of appropriate conditions to ensure levels would be no more than those predicted in the ES plus a 2dB margin. The limits in the proposed noise conditions set a flat 45dB across all wind speeds for The Sportsman's Arms, which relates to the higher permissible limit for financially involved properties set out in ETSU-R-97¹⁷; a flat 35dB across all wind speeds for all other residential properties; and for Cwm-y-Rhinwedd the limit would be 5dB above the day time limits, rather than 5dB above day and night time limits combined as advocated in ETSU-R-97.
59. Given the location of the site within SSA-A and its proximity to other operational and consented wind farms, the Council was concerned that if a flat 35dB is applied to all other properties and the turbines operate at that level, there would be the potential under certain wind conditions to give rise to unacceptable cumulative noise levels at

¹⁷ 'The Assessment and Rating of Noise from Wind Farms', September 1997 paragraph 24

the most affected properties. The Council considered Cwm y Rhinwedd, The Sportsman's Arms, Wern Uchaf and Hafod Caradoc to be the four most affected properties. In his decision on the GBWF scheme the Inspector took account of prevailing winds when considering cumulative noise¹⁸.

60. The Council was of the strong opinion that the noise levels for these four most affected properties should be restricted to 2dB above the predicted noise levels set out in the ES, including for The Sportsman's Arms, irrespective of whether or not it is financially involved since the predicted noise levels for this property as set out in the ES were substantially less than 45dB. Although it was not the Council's advocated approach, it considered the imposition of 5dB above combined day and night background noise levels would be preferable to the noise levels suggested by the Appellant. A comparison of the proposed noise levels is made in the tables in paragraph 5.5.10 of the Council's statement of case.
61. The Sportsman's Arms is referred to by the Appellant as a financially involved property but it was not clear if it was the owner who was in occupation and no details of the financial involvement had been provided. Whilst ETSU-R-97 makes provision for the noise limit at financially involved properties to be set at 45dB, this is when the occupant is the financially involved party. In addition the High Court judgement on the Brackenside Farm wind turbine case¹⁹ makes it clear that higher noise levels must only be applied where the occupant of the affected property has a significant financial involvement in the scheme and not the owner of the property.
62. Notwithstanding the basis on which The Sportsman's Arms is occupied, there is a duty on the Council to protect the amenity of this property in perpetuity. It would appear to be perverse to apply a flat rate 45dB limit where the noise assessments presented in the ES demonstrate that the noise levels at the property would be much lower.

The Case for Pant y Maen Wind Limited

63. The Appellant's case is set out in the submitted grounds of appeal and final comments. A response to my request for consideration of the publication of TAN 24 and TAN 8 Database 2016 – Review of On-Shore Wind Farm Development on the case already submitted was also received and has been taken into account. The material points are set out below.

Gorsedd Bran Appeal Decision

64. The Appellant accepts that the GBWF appeal decision is a material consideration in the determination of the appeal. However, it considers that there are material differences between the appeal proposal and the GBWF scheme which affect the weight that can be attributed to the appeal decision. In addition to the difference between the two schemes in terms of the number and siting of the turbines, blade tip height and site boundary and the adoption of the LDP, there have been the following changes.
65. In terms of Welsh planning policy the GBWF appeal decision was made against the background of PPW (2002) and the Ministerial Interim Planning Policy Statement 01/2005 Planning for Renewable Energy. Edition 4 of PPW, published in January 2011, brought about significant changes²⁰ in renewable energy policy and PPW 9 continues to

¹⁸ Paragraph 23

¹⁹ DCC Document 21

²⁰ As set out in WAG 11-11375 Summary of Changes Planning Policy Wales Edition 4 February 2011 (Appellant's Bundle 2.B Tab 7)

recognise WG commitment to using the planning system to optimise renewable energy generation. It is clear from the NPS, published in 2011, that these changes are likely to be a material consideration in the determination of applications under the 1990 Act.

66. The baseline has changed, the most significant difference being the consent for the CFWF. Nant Bach and Derwent Bach wind farms were also given consent in 2011 and the consent to increase the blade tip height at BWF was given in 2016. In addition several single turbines have been granted consent in the area.

Target Capacities for SSA-A

67. The Appellant initially considered that the maximum installation capacity for SSA-A of 212 MW confirmed in the Minister's letter would not be exceeded as a result of the proposed development. Having considered the TAN 8 Database 2016, the Appellant remained of the same opinion.
68. According to the TAN 8 Database the consented total MW capacity is 186.5 MW. This comprises CFWF (96 MW), Nant Bach (27.5 MW), BWF (40 MW) and Derwydd Bach (23 MW). The operational capacity is stated at 30.5 MW consisting of TMWF (20.3 MW) and Wern Ddu (9.2 MW). Together the consented and operational schemes total 217 MW. However, it is common ground between the Appellant and the Council that Derwydd Bach and Nant Bach are unlikely to proceed. It is also known that the capacity of BWF has been reduced to 37.6 MW. Furthermore the 20 MW capacity awaiting determination is the scheme for eight turbines originally submitted. Since the scheme subject of the appeal is for seven turbines the potential output has been reduced to 17.5 MW.
69. If Derwydd Bach and Nant Bach are removed from the consented capacity, and with the output of the appeal proposal reduced to 17.5 MW, the potential MW total would be 184 MW comprising of 30.5 MW operational, 136 MW consented and 17.5 MW awaiting determination. The Appellant therefore remains of the opinion that the target capacity of 212 MW for SSA-A has not yet been met and would still not be met if the appeal scheme went ahead.

Benefits of the Proposed Development

70. The 17.5MW indicative capacity of the proposal would generate 44.46 million kWh per year²¹ which would power 11,180 or 27.29% of the homes in Denbighshire each year. The potential of CO₂ emissions savings from the development could account for the equivalent of 23.74% or 57.62% of the total annual domestic CO₂ emissions estimate for Denbighshire when compared against gas-fired or coal-fired electricity generation respectively. These savings would contribute to the delivery of the WG target of reducing greenhouse gas emissions by 40% by 2020.²²

Landscape and Visual Amenity

71. The Council's reason for refusing permission refers to the unacceptable impact on views of the Snowdon Horseshoe from the top of Moel Famau in the AONB. The Snowdon Horseshoe, located within the northwest corner of SNP, consists of the four peaks of Snowdon, Garnedd Ugain, Crib Goch and Y Lliwedd. They are visible from surrounding hills, including the AONB. The distance between the summits of Moel Famau and Snowdon is approximately 55.8km.

²¹ Appellant's Grounds of Appeal paragraph 8.2

²² The Climate Change Strategy for Wales, October 2010

72. The primary purpose of an AONB is to conserve and enhance the natural beauty of the area. The Clwydian Range and Dee Valley Management Plan 2014-2019²³ (CR&DVMP) identifies the features and qualities that make up the special character of the area. With regard to landscape character and quality these include space and freedom in relation to access to the landscape and the uninterrupted and extensive views from high places within it; and a sense of belonging and attachment to the landscape. Moel Famau is listed as an iconic visitor and cultural attraction within the AONB and the Offa's Dyke National Trail is recognised as making the AONB particularly accessible.
73. EN-1 confirms that the fact that a proposal would be visible from within a designated area should not in itself be a reason for refusing consent. In paragraph 5.9.12 it states that the aim should be to avoid compromising the purposes of designation.
74. The visual effect of the development on the view from the summit of Moel Famau²⁴ is rated in the ES as medium-low. The closest turbine would be approximately 19km away and would be viewed within a very open and large scale landscape, occupying only a small proportion of the overall field of view. The turbines would be viewed at a similar elevation to the viewpoint and they would not be seen against the peak of Snowdon and would not break the skyline. There are several existing on-shore and off-shore wind farms within the view, all of which are noticeable rather than prominent. The proposed turbines are predicted to be a noticeable additional feature especially during good weather. At times of good visibility it is anticipated that blade movement would be discernible but not prominent. However, due to the scale of the landscape and the distance at which the turbines would be viewed it is not predicted that they would be dominant or change the overall nature of the view.
75. On the basis of the assessment made in the ES the Appellant is of the opinion that the development would not have a significant effect on visual amenity or result in a change to the character of the AONB. The special qualities of the AONB would not be harmed to an extent that it would compromise the purposes of the designation. The turbines would not be directly in line with Snowdon and would only be viewed against the lower slopes of Y Lliwedd. This is an important difference from the GBWF scheme where the Inspector was concerned that the turbines would be directly in line with Snowdon and would break the skyline on either side of its summit.
76. The ES rates the effect of the proposal on the visual amenity of a receptor standing on Moel Famau as medium. The turbines would not form the main focus of the view or significantly alter the view that is currently experienced by visitors to the summit. The turbines would likely form an additional component within a very broad panoramic view. The Appellant consequently considers that the turbines could be accommodated alongside the many existing visual elements that currently form the view. The effects would be limited to a small proportion of the overall view and the existing underlying character of the landscape would remain unchanged.
77. The significance of cumulative effects on the view from Moel Famau are considered to be medium and neutral as there would be no significant change to the key attributes that currently define the view. The consented turbines of CFWF would occupy a significant proportion of the view. This element of the baseline did not exist at the time of the GBWF decision. The ES states at paragraph 6.7.201 that all developments would be viewed in a broad open landscape and not within close proximity of the viewpoint, which would assist in absorbing the turbines into the landscape. Whilst the

²³ Appellant's Bundle 2.B Tab 8

²⁴ Viewpoint 5 of LVIA, Section 6 of ES

turbines would be a noticeable feature, the development would not significantly increase the proportion of the view in which wind farm development would be seen. The combined effects of the development and all other existing and submitted developments would not be the overriding defining element of the view as the broad views to the east, the views across the Vale of Clwyd and views to the mountains within SNP would all be retained.

78. Following the removal of turbine T6 the development would be viewed as a more compact cluster of turbines, extending in front of a smaller proportion of the Snowdon Horseshoe and creating greater separation between the turbines and the summit of Snowdon. Furthermore, the number of turbines visible against the lower slopes of the Snowdon Horseshoe would be reduced to three, reducing any perceived effects the development would have on the Snowdon Horseshoe.
79. Landscape consultants acting for the Council confirmed that the development would not break the skyline of Snowdon and, in relation to distant views, concluded that the development may be seen as part of a series of wind energy developments within SSA-A. The combined operational and consented wind energy developments would make the upland regions between Conwy and Denbighshire an area characterised by wind turbines rather than commercial plantations. This is anticipated by TAN 8 which states that within (and immediately adjacent) to SSA the implicit objective is to accept landscape change i.e. a significant change in landscape character from wind turbine development. Within a broad and large landscape the development would not be seen as the most prominent feature.
80. The Council's consultants also concluded that the local area is already influenced by existing and consented wind energy developments. The consultants considered that the large scale and open landscape could accommodate the development without unacceptable damage to landscape character and quality. There was broad agreement with the LVIA and on the basis of their assessment the consultants did not consider that the development would cause undue landscape and visual impacts and recommended approval of the application. These comments were in respect of the original scheme for 8 turbines and were not reviewed to reflect the amended scheme.
81. The Appellant considered that parallels could be drawn between the appeal proposal and the CFWF. The Examining Inspector considered that there would be no significant impact on the landscape character of either the AONB or SNP arising from the CFWF. Although it was concluded that there would be harmful changes westward from the AONB, the acceptance of significant visual and landscape impacts set out explicitly in the energy NPS and in the designation of SSA by the WG, was a matter which weighed in favour of granting consent for the CFWF.
82. Whilst the turbines consented in the CFWF will not lie in line with the Snowdon Horseshoe when viewed from the AONB, the development would be considerably larger in terms of the number of turbines and blade tip height than the appeal proposal. As a result the CFWF turbines will occupy a far greater proportion of the view when looking west from the AONB towards the SNP than the proposal. The CFWF will create the impression of a continuous line of turbines extending from Hafoty Ucha wind farm in the south to the northern edge of TMWF in the north. In addition many of the CFWF turbines, unlike the appeal proposal, will break the skyline.

Residential Amenity

83. The level at which an impact on residential amenity becomes unacceptable has been addressed in a number of appeal decisions. The CFWF decision endorsed the principle

that harm to residential amenity is found to occur when turbines are present in such number, size and proximity that they represent such an unpleasantly overwhelming and unavoidable presence in main views from the house and garden, that the property is likely to become an unattractive and thus unsatisfactory (but not necessarily uninhabitable) place in which to live²⁵. Even where a change of view could be described in these terms, such effects would fall to be weighed in the balance with the wider public benefits which the development is designed to achieve.

84. EN-3 at paragraph 2.7.48 recognises that there will always be significant landscape and visual effects from wind farms for a number of kilometres around the site. There is an implicit objective in TAN 8 within and immediately adjacent to a SSA to accept significant change in landscape character from wind turbine development.
85. The Residential Visual Amenity Assessment²⁶ (RVAA) considered the likely individual and cumulative effects of the proposal on the visual resource of residential properties within 2km of any of the proposed turbines during the operational phase. Due to the screening effects of topography and vegetation the RVAA concluded that there would be no significant effects, including cumulative effects, on visual amenity with the exception of The Sportsman's Arms. The RVAA states that from this property the wind farm would be a prominent feature especially from southeast facing rooms and outside areas. Whilst the effects on the visual amenity of the occupants are considered to be significant and adverse, the proposal is not predicted to make the property an unattractive or unsatisfactory place to live. In addition the property lies within Conwy County Borough Council and the owner has a financial interest in the scheme. Neither raised a formal objection to the development.
86. The RSM²⁷ considered the effect the removal of turbine T6 would have and the wireframe demonstrates how the remaining seven turbines would create a more cohesively clustered development in relation to each other and the existing and consented turbines of TMWF, CFWF and BWF. The visual effects are predicted to remain high and significant. However, the angle of view the turbines would occupy would be reduced to the benefit of views of the turbines from The Sportsman's Arms and in the wider landscape.
87. In its reason for refusal the Council replicated the Inspector's findings in the GBWF appeal decision that "*the cumulative effect of the proposal together with the existing and consented turbines would result in the local community having the appearance of becoming increasingly surrounded by turbines on all high ground to the south and west*". However, in comparing the two schemes, the current proposal is for seven instead of 13 turbines; blade tip heights of 102m instead of 125m; and rotor diameters of 84m rather than 95m. The site boundary is also smaller, GBWF had included areas of forestry to the east and northeast. The GBWF decision was also made in a different policy context prior to the publication of edition 4 of PPW and the energy NPS and the baseline was significantly different. Since the GBWF decision consent has been given for the CFWF, the height increase for BWF, Derwydd Bach, Nant Bach and several single turbines.
88. In his decision on GBWF the Inspector deemed the scheme to be unacceptably overbearing for ten residential properties in the area. The appeal proposal is sited on land further west than many of the GBWF turbines and would utilise less land of lower

²⁵ Appellant's Bundle 1.A Tab 6 paragraph 4.207

²⁶ Appendix 6A.3 of Environmental Statement

²⁷ Appellant's Bundle 2.A Tab 6

topography which, combined with fewer and smaller turbines, would result in fewer properties having views of the development than in the GBWF scheme. Six of the eleven properties assessed by the RVAA would not have views of the appeal turbines. In addition the angle of view the turbines would occupy in the landscape would be less than in the GBWF scheme and the separation distances would be greater with the exception of The Sportsman's Arms. Although the development would be a prominent feature from this property, it would not be an overbearing feature from it or from any other properties considered in the RVAA.

89. In respect of the effect of the proposal cumulatively with other operational and consented wind farms in the area the RVAA found that only two properties would be affected. The cumulative effects would be high in respect of The Sportsman's Arms and low for Nant-Gwyn, approximately 1.5km to the northwest of the site. In comparison with the GBWF scheme the Appellant considered that the proposal would have less effect on the surrounding local community.
90. The CFWF report noted that there would be significant change to the visual and aural amenities of a number of residences in the vicinity of the site but such changes were a consequence of the policy decision by WG in TAN 8 to accommodate large scale wind farm development in SSA. The impact on the majority of the properties was found to be outweighed by the strong policy presumption established in EN-1 and EN-3. The level of adverse impact was found to be particularly harmful in respect of three properties. This was weighed against the proposal but was found to be overridden by the weight of national policy in favour of the project.

Historic Environment

91. The Council's concerns only relate to the setting of SAM. The Appellant submits that proper detailed analysis of the original function and current interest of the heritage asset can lead to understanding its heritage significance, and then analysis of the setting (or surroundings) can be undertaken to establish which elements contribute to that significance. The Appellant considers that what is of importance in assessing the effect of the development on the SAM is the degree to which the proposal would change the baseline and thereby affect the contribution of the setting to the heritage significance of the assets. The ridgetop location for burial mounds and cairns is significant for intervisibility within them and with contemporary settlement in the valleys. Hypothetically if the turbines are sufficiently prominent or located in an array which detracts from the ability to understand and appreciate that relationship, this would be an impact within the setting that would harm the significance of the asset.
92. The assessment in the ES was conducted using a bare earth model whereas the baseline should include current conditions including structures and vegetation. The Appellant submits that if the SAM are not visible at present then assessing them against a hypothetical baseline is inaccurate and produces a higher degree of impact. A proper detailed analysis of the original function and current interest of the heritage asset can lead to understanding its heritage significance and then analysis of the setting can be undertaken to establish which elements contribute to that significance.
93. EN-3 notes at paragraph 2.7.43 that onshore turbines are generally consented on the basis that they are time-limited in operation and that account should therefore be taken of the length of time for which consent is sought when considering the indirect effect on the historic environment, such as the effect on the setting of designated heritage assets.

94. The assessment of the effect of the development on cultural heritage carried out as part of the ES concluded that of 39 SAM within 10km of the site, 19 would have a theoretical view of the turbines. In five cases the significance of the impact on their setting was considered to be slight; in seven cases the effect was deemed to be moderate or slight; and in five cases the effect was judged to be significant. It is only in the case of Bwlch-Du Round Barrow (DE085) and Gorsedd Bran Round Barrows (DE168) that the significance of the visual impact was considered to be large or very large and thus significant. It is emphasised that this is on bare earth visual modelling rather than real-life assessment.
95. In relation to cumulative impact the ES concluded that the proposal and nearby wind farms would have significant visual cumulative impacts on 17 SAM, seven listed buildings and one registered park and garden within 10km of the site. Given that the site is within SSA-A, an area identified by WG as suitable for large scale wind farms, cumulative impacts are to be expected and the proposal would be a relatively minor addition to an already busy area.
96. Cadw²⁸ objected to the original scheme for eight turbines on the grounds that the ES identified significant impacts on the settings of seven SAM. Cadw confirmed that it is the intervisibility between the Bronze Age funerary and ritual sites that contributes to the setting of the SAM and their significance. Of particular concern to Cadw was the very large visual impact caused by the proximity of the development to the Gorsedd Bran Round Barrows. The effect on cultural heritage was not a reason for refusal in the GBWF case nor did Cadw object to that development despite the same statutory and policy context relating to SAM.
97. In seeking to address the concerns of Cadw the Appellant revised the scheme by the removal of turbine T6 and proposed micro-siting of T8 and the impact of the revision on the setting of the SAM was assessed in the RSM. Cadw²⁹ maintained its objection to the development and considered it would have a significant adverse impact on the setting of Bwlch-Du Round Barrow (DE085); Circular Platforms northwest of Hen Ddinbych (DE087); Rhiwiau Round Barrow Cemetery ((DE100); Round Cairn 648m northeast of Tan-Y-Foel (DE157); and Gorsedd Bran Round Barrows (DE168). Figure 13.2 of the ES provides a useful illustration of the location of these features in relation to the site. When considered alongside other existing and proposed schemes in the area Cadw considered that such impacts would be likely to constitute significantly cumulative adverse impacts on the settings of the prehistoric funerary and ritual monuments within the landscape. Cadw considered that the RSM underestimated the overall impact of the revised scheme on the SAM listed, including intervisibility between Gorsedd Bran Round Barrows and other SAM.
98. In respect of Rhiwiau Round Barrow Cemetery (DE100) the RSM³⁰ concluded that the removal of turbine T6 would reduce the visibility of the wind farm as a whole such that only four of the turbines would be visible from the SAM. The magnitude of the impact was considered to have been reduced from moderate to minor and the resulting significance classed as moderate/slight. Cumulative impacts in terms of magnitude and significance were rated as negligible and slight respectively.
99. The RSM considered that the views towards Round Cairn 648m northeast of Tan-Y-Foel (DE157) would be unaffected but in views from it towards the southwest the turbines

²⁸ Appellant's Bundle 1.B Tab 1

²⁹ In its letter of 6 May 2016 Appellant's Bundle 1.B Tab 2

³⁰ Figure 13.4c(i)

would be visible on the skyline. However, the removal of turbine T6 would reduce the visibility of the wind farm as a whole and the magnitude of the impact would be reduced from moderate to minor with resulting significance classed as moderate/slight. The magnitude of the cumulative impact was considered to be minor and the resulting level of significance moderate/slight.

100. In the original scheme turbine T6 would have been 200m from the nearest barrow on Gorsedd Bran whereas in the revised scheme T5 would be approximately 540m to the south. The increased distance would reduce the impact on local views towards the barrow and although the turbines would still be a prominent feature in more distant views, the overall impact would be less. In the GBWF scheme turbines would have been 210m from the southernmost and 45m from the easternmost barrows.
101. In relation to intervisibility of the Gorsedd Bran Round Barrows with others in the wider area, the northeast pair are not intervisible with DE085 and DE087 to the west and from the southwest barrows the turbines would not break intervisibility with DE085, DE087, DE100 or DE157. According to the RSM³¹ the revised scheme would still have a major impact on the southwestern barrows, affecting views towards them from the southwest as well as views from the barrows to the south. The impact on the northwestern barrows is considered moderate. The barrows lie beyond the appeal site boundary and at present they are screened by mature forestry. The clear felling of the trees within the appeal site and its return to a heathland habitat would increase the opportunity for intervisibility between the assets. The level of significance of the impact would be large/very large for the closest barrows and moderate/large for the northernmost pair. The magnitude of cumulative impact would be major and its significance large/very large.
102. The RSM considered that there would be no theoretical lines of sight between either Bwlch-Du Round Barrow (DE085)³² or Circular Platforms northwest of Hen Ddinbych (DE087)³³ and the northeastern pair of barrows on Gorsedd Bran (DE168). In views towards the southernmost pair from DE085 the removal of turbine T6 would separate the wind farm into a central group of four turbines with a further two to the left and T8 to the right. In similar views from DE087, T8 would be very close to the theoretical line of sight between DE085 and the southwestern pair of barrows on Gorsedd Bran, although careful micro-siting of T8 could reduce the impact. For DE087 this line of sight would not be impeded directly, although all seven turbines would be visible in that direction of view. The RSM rates the overall visual impact on the setting of both assets to be moderate resulting in a level of significance of moderate/large rather than the large/very large as had previously been the case in respect of DE085.
103. Given Cadw's continuing concerns regarding the proposal SLR Consulting Limited (SLR) were commissioned by the Appellant to review the cultural heritage section of the ES, the RSM and Cadw's responses to the application. SLR found that:
- Based on the wireframes alone, the magnitude of the effect of the development on Rhiwiau Round Barrow Cemetery (DE100), and by implication the SAM further removed from appeal site, would be minor;
 - Based on the wireframes alone, the magnitude of the effect of the development on Gorsedd Bran, Bwlch Du and Hen Ddinbych could be assessed as major;

³¹ RSM Figure 13.4d(i)

³² RSM Figure 13.4a(i)

³³ RSM Figure 13.4b(i)

- The felling of forestry and the restoration of moorland has the potential for beneficial effects not only on the assets within the development area but also Gorsedd Bran. It is possible that the removal of the plantation woodland and the restoration of the heathland would help to re-establish a more appropriate setting for the SAM, enabling a better understanding and appreciation of them within their setting and allowing a greater degree of visibility;
 - Cadw is factually incorrect in relation to the intervisibility between DE85 and DE87 and the northeastern pair of barrows on Gorsedd Bran as these barrows lie approximately 800m to the northwest and are well beyond the limit of the wire frame's northeastern side in Figure 13.4a of the RSM;
 - The baseline inclusive of existing changes to the setting of the SAM should be considered. The settings of the SAM have been significantly altered since their construction and the existing baseline is such that for some SAM there is virtually no intervisibility with the proposed turbines. This has resulted in an overstatement of the impact on the settings of the SAM in the ES;
 - For example, the southwestern barrows within the Gorsedd Bran group (DE168) are entirely surrounded by a conifer plantation with trees approximately 20m tall. The existing visual setting of the SAM therefore only extends from the barrows to the edge of the clearing and the barrows are not visible as they are encircled by dense conifers. The setting of DE168 is therefore tightly constrained to a small clearing within the woodland which would not be changed as a result of the development. In respect of Rhiwiau Barrow Cemetery (DE100), views from the barrows to the southeast towards the development are blocked by farm buildings and trees alongside the road adjacent to the SAM.
104. The matter was addressed in the CFWF report in respect of the Cefn Banog Ancient Village (DE029). The report considered that once the project was in operation it would be the visual impact which would potentially affect the setting of historic assets. It goes on in paragraph 4.262 to state *"Within the application site, visibility is mainly restricted by forest trees, apart from vistas along roads and tracks and within clearings. The Cefn Banog Ancient Village is located within a clearing, but views of, and outwards from the monument are generally restricted. As a result there would be no visual impact on the setting of the SAM. The same circumstances apply to scheduled sites which are within the forest but outside the application site. Ten of the 24 SAM within 5km of the site can be excluded from the assessment for this reason"*.
105. The SLR report emphasised the need for the baseline to include the current physical changes to the setting of the SAM including vegetation and structural constraints to visibility. It states on page 4 *"Once the existing real-life constraints to intervisibility due to vegetation and structures are included as part of the baseline, the degree of change and thus magnitude of potential impact to the visual setting of the scheduled monuments is greatly reduced. This would result in a much lower significance of effect in EIA terms, and thereby should provide a satisfactory solution to Cadw's perceived concerns based on the information available to them"*.
106. Cadw refers to the cumulative impact of seven turbines on seven SAM, rather than the conventional approach which looks at the cumulative effect from wind farms planned and under construction as an addition to the effects from the proposed development. SLR states that the assessment in the ES identified a degree of cumulative impacts for each SAM and demonstrates clearly the minimal effect this would have.
107. The creation of heathland habitat within the site could be an enhancement of the setting of some of the SAM as it would recreate a more natural environment that would

have been part of the surroundings of the barrows when they were constructed. This would contrast with the existing conifer plantation which blocks intervisibility between some of the SAM. It is also endorsed by the guidance Setting of Historic Assets in Wales which states in section 6 that enhancement measures can include the removal of trees to open up an intended view.

108. Following the SLR report the Appellant submitted to the Council a series of photomontages³⁴ of views from several of the SAM which it considers demonstrates:
- In the view from the eastern barrows of Gorsedd Bran (DE168) no turbines would currently be visible³⁵. Views of the turbines may be possible if the forestry is felled, but this would only constitute a small part of the total view. The presence of the trees is already having a significant adverse effect on the setting of the eastern barrows. Clear felling would be a net improvement to the setting as wider views would be available to the south;
 - The western barrows of DE168 are located on private land within tall commercial forestry and no views of the turbines would be possible. The trees currently have a significant adverse effect on the setting of the western barrows. If the forest is clear felled the turbines would be temporarily visible. In addition wider views to the south would be possible including views across to DE085 and DE087 which would result in a temporary net improvement to the setting;
 - The photography for DE100³⁶ was taken approximately 60m to the south of the asset on the roadside and does not include the screening effects of the properties of Rhiwiau and Rhiwiau Nursery and the trees that run alongside the road in front of the SAM. From this location views of the eastern barrows of DE168 are not possible. In theory tip heights of 3 turbines and hub of one would be visible;
 - The views from DE124 towards DE100 are screened by trees in the foreground and views of the eastern barrows of DE168³⁷ are possible but almost undistinguishable. In theory the tip heights of 5 turbines and the hubs of two would be visible from this location.
109. In response to the SLR report and the additional photomontages, Cadw³⁸ requested the Council to seek a new cultural heritage chapter of the ES. The Appellant considers that sufficient information has been submitted in relation to cultural heritage and archaeology and that a new cultural heritage of the ES is unnecessary³⁹. Furthermore the Appellant contends that in assessing the effect of the development on the historic environment TAN 24 is clear that the public benefit of taking action to reduce carbon emission, or to adapt to the impact of climate change, should be weighed against any harm to the significance of historic assets.

Noise

110. Section 11 of the ES concluded that predicted turbine noise levels and measured background noise levels indicate that for all receptors neighbouring the proposed development, wind turbine noise would meet the day-time hours and night-time hours noise criteria specified in ETSU-R-97. Cumulative impacts meet ETSU-R-97 criteria and noise from construction activities would be of negligible significance.

³⁴ Appellant's Bundle 2.A Tab 8

³⁵ Photomontage 5 of Bundle 2.A Tab 8

³⁶ Photomontage 3 and 3a of Bundle 2.A Tab 8

³⁷ Photomontage 4 and 4a of Bundle 2.A Tab 8

³⁸ Letter in Appellant's Bundle 1.B Tab 2

³⁹ Letter in Appellant's Bundle 2.A Tab 9

111. Regarding The Sportsman's Arms, it is currently let on a short term tenancy which is due to end before any construction works would start on site. The Appellant has an option on the property the terms of which restrict the creation of further tenancies without the consent of the Appellant thereby securing the long term financial involvement of the owner/occupier of the property. On this basis, the Appellant considers that the fixed limits should be 45dB(A), an approach which would be compliant with ETSU-R-97. For residential properties ETSU-R-97 recommends external noise limits are set within the range of 35 to 40 dB or 5dB(A) above background noise, whichever is the greater. In its suggested conditions the Appellant adopted the lower absolute level of 35dB for the daytime and 40dB for the night time period (3dB lower than the ETSU-R-97 standard limit).
112. Noise limits do not need to relate directly to the noise levels predicted in the ES and such an approach is not adopted by ETSU for good reason. Lowering limits to the predicted levels based upon the assessment of a candidate turbine currently available could unreasonably constrain the developer and ultimately threaten the deliverability of the wind farm by limiting the final turbine choice. ETSU limits are set at a level which protects amenity whilst providing reasonable flexibility for developers in final turbine procurement and it should be noted that the TMWF, Wern Du and CFWF all have conditions which allow a higher daytime limit of 40dB. The approach taken by the Appellant is therefore entirely reasonable.
113. ETSU limits apply to the cumulative effect of all wind turbines in the area; the estimated emissions and resulting limits have arrived out of a cumulative assessment of noise taking account of other operational and consented wind farms.

Shadow Flicker

114. The shadow flicker assessment contained within the ES concluded that the only property which would require assessment was Cwm y Rhinwedd which, using worst case assumptions, would be affected by turbine T6 for an annual total of 5 hours and a maximum of 20 minutes in any one day. This is a low level of shadow flicker hours per year which would not cause a material reduction to residential amenity. Whilst the removal of T6 should have removed any expectation of shadow flicker, a condition is proposed requiring measures to mitigate the incidence of shadow flicker at the affected property should it be experienced there. Subject to the imposition of the condition the Council considered the development would comply with Policy VEO 9 of the LDP.

Ecology

115. The ES and supplementary assessments concluded that no significant effects should arise from the development, including on designated sites in the locality, other than for two bat species for which specific mitigation and monitoring measures are proposed. Mitigation is proposed during the construction stage to address impacts on black grouse and nightjar and a detailed Habitat Management Plan and Protected Species Plan is proposed prior to construction. The Council concluded that, subject to appropriate conditions, the development would not have an unacceptable impact on nature conservation in accord with Policies VOE 5 and VOE 9 of the LDP and national guidance.

Highways

116. The ES assessed the proposed construction traffic routes, the potential impact of traffic and HGV movements, road safety and effect on road structure and concluded that the effects of the development on traffic and transport would not be significant. A

Traffic Management Plan is proposed to coordinate construction phase operations. The Council concluded that it had no fundamental concerns regarding the highway implications of the development and subject to appropriate conditions it would comply with Policy VOE 9 of the LDP.

Aviation and Radar

117. There are no objections from any of the air safeguarding or aviation authorities. The Ministry of Defence has advised that suitable aviation lighting should be fitted to the turbines and subject to the imposition of a condition to this effect the Council is satisfied the development would have no adverse effects on aviation and radar interests in the area.

Tourism

118. According to available literature wind farms have only a minor impact on visitor activity and many tourists are not discouraged from visiting an area with a wind farm. The ES concludes that the proposal would have a negligible effect on local tourist features given its limited visibility from many locations. Whilst the concerns of interested parties were acknowledged by the Council, it concluded that there was limited evidence to form the basis for a refusal on grounds of the direct impacts of a single wind farm on tourism. There are operating and consented wind farms in the area and it would be unreasonable to single out the proposal as being unacceptable.

Hydrology/Water Supply/Flooding/Surface Water

119. The development has been designed to avoid hydrologically sensitive areas, buffer zones have been adopted for natural watercourses and suitable crossing types have been proposed for watercourse crossings. The ES concludes that with mitigation the significance of construction and operational effects on all identified receptors would, at most, be minor. Natural Resources Wales (NRW) raised no concerns regarding flood risk subject to appropriate water management measures to attenuate and treat surface water run-off from felling operations and on-site infrastructure. Conditions are suggested with regard to the disposal of surface water together with the baseline monitoring of private water supplies before commencement of development and arrangements to mitigate impacts which may arise. The Council was satisfied that, subject to the imposition of appropriate conditions the development should not give rise to unacceptable effects in respect of the local water environment.

Written Representations

Cadw

120. The representations made by Cadw in respect of the development during the course of the application have already been referred to in some detail in the cases of the parties. Since the appeal is to be determined on the basis of the amended scheme the comments made by Cadw on the original scheme⁴⁰ are not reported. In its response to the revised scheme⁴¹ Cadw confirmed that its role in the planning process is to provide an assessment of the likely impact of the proposal on heritage assets and it is for the decision maker to weigh that assessment against all the other material considerations in determining whether to grant permission.

⁴⁰ Letter dated 28 August 2015

⁴¹ Letter dated 6 May 2016

121. In its response to the amended scheme Cadw also had regard to the RSM. It was of the view that the development would have a significant adverse impact on the setting of the following SAM: Bwlch-Du Round Barrow (DE085); Circular Platforms northwest of Hen Ddinbych (DE087); Rhiwiau Round Barrow Cemetery (DE100); Round Cairn 648m northeast of Tan-Y-Foel (DE157); Gorsedd Bran Round Barrows (DE168) and Round Barrow 828m west of Cae-du (DE172). When considered alongside other existing and consented schemes in the area, Cadw opined that the impacts would be likely to constitute a significantly cumulative adverse impact on the settings of the prehistoric funerary and ritual monuments in this landscape. Cadw therefore objected to the impact of the development on the settings of the SAM listed as it was considered to be contrary to national policy relating to the historic environment.
122. Cadw considered that the RSM underestimated the overall impact of the revised scheme on the SAM listed above, including the intervisibility between Gorsedd Bran Round Barrows (DE168) and the other SAM. DE168 encompasses two pairs of Bronze Age barrows together with a possible fifth barrow located along the ridge of Gorsedd Bran. The western pair of barrows is located in a large clearing in mature forestry, which is due to be felled, whilst the eastern pair of barrows is located in open moorland. Cadw acknowledged that the removal of turbine T6 would to some extent reduce the overall impact of the turbines but, it considered that the wire-line drawings for viewpoints 4a and 4b clearly demonstrated the foreground dominance of the remaining turbines in views south from the barrows and set against a backdrop of densely grouped turbines in the distance. On this basis the impact of the revised scheme on the eastern pair of barrows remained large/very large. It was noted that the RSM upheld the assessment of the two western barrows as large/very large.
123. Bwlch-Du Round Barrow (DE085) and the Circular Platforms northwest of Hen Ddinbych (DE087) are located approximately 1.4km southeast and 2.4km southsoutheast of the site respectively. They form part of a wider group of prehistoric burial and ritual monuments, some of which are undesignated, that generally occupy the west facing slopes overlooking the northeast end of Llyn Brenig. Cadw considered that the RSM underestimated the potential impact of the turbines on lines of view to and from DE085 and DE087 together with the full range of barrows within the scheduled Gorsedd Bran group, as demonstrated by the wire-line drawings of viewpoints 1 and 2. The turbines would appear as a very prominent middle distance feature within the foreground of the group as a whole and for this reason Cadw considered that the impact on DE085 and DE087 remained at a large/very large level of significance.
124. Rhiwiau Round Barrow Cemetery (DE100) is sited approximately 2km to the northeast of the appeal site. Together with Blaen y Cwm Round Barrow (DE124) it is located on the central ridge of Blaen-y-Cwm with views towards DE168. Cadw was of the opinion that the appearance of all four turbines along the ridge line in viewpoint 3b (figure 13.4c) would detract from views towards DE168, which presently forms the only skyline feature in this direction. Cadw considered that the impact of the amended development on the setting of the SAM would be moderate and the level of significance would remain moderate/large.
125. Round Cairn (DE157) is located some 5km to the northwest of the site on the crest of a broad northeast to southwest ridge. It has a prominent position which affords panoramic views which encompass DE100 and DE124. Cadw considered that the removal of turbine T6 would not reduce the overall impact of the remaining seven turbines on views from Round Cairn and would not significantly reduce the potential cumulative impact of the remaining seven turbines, as many existing turbines are also

visible from this cairn. The original assessment of the impact on this SAM as moderate, with a moderate/large level of significance, should stand.

126. Round Barrow 828m west of Cae-du (DE172) is located on the northeast end of the ridge crowned by DE157 and is approximately 5km northwest of the appeal site. It has significant views towards DE100 and DE124 and the turbines would be visible behind them. Cadw did not agree that the removal of turbine T6 would significantly reduce the overall impact of the turbines on such views as, according to the drawing of the Zone of Theoretical Visibility (ZTV), the remainder of the group would be likely to be visible. There would also be cumulative impacts with other distant groups of turbines. Cadw therefore considered the revision of the assessment of moderate impact with a moderate/large level of significance remained valid.
127. In its final response to the planning application⁴² Cadw recommended that the Council sought a revision of the cultural heritage chapter of the ES which assessed the impact on the historic environment of a seven turbine development. Cadw noted that the Appellant had not provided a revised statement but relied on information contained in several different and contradictory reports. Cadw maintained that there was a need for a full assessment of the impact of the proposal on the historic environment, most notably on the setting of Gorsedd Bran Round Barrows (DE168), and including the long term management of the surrounding forestry, some of which had been cited as currently blocking views between monuments.
128. In its response to the appeal⁴³, Cadw reiterated the views it expressed in its letter of 24 August 2016 that there was a need for a full assessment of the impact of the proposed seven turbine development on the historic environment.

Natural Resources Wales

129. NRW confirmed that the comments it had made in respect of the application were relevant to the appeal. The material points are outlined below.
130. The proposal would encroach within an important view of Snowdon from Moel Famau, within the AONB. Whilst the proposal would be seen as a relatively minor addition in the context of the extensive consented wind farm landscape associated with the SSA, the proposal would extend turbines in front of the Snowdon Horseshoe. It would intrude upon the uninterrupted views of northern Snowdonia and erode the visual amenity of visitors with a particular interest in the view. NRW considers the change in view would be significant.
131. The proposal would have a visual influence upon a large part of the eastern area of the Mynydd Hiraethog Historic Landscape within which there are large areas currently unaffected by consented windfarms associated with the SSA. Prominent change would be experienced for approximately 4km of the Clwydian Way and the turbines would be visible along the A543 for approximately 3km. The submitted assessments identify significant effects upon views and historic character.
132. The surveys and assessments undertaken demonstrate that the proposal would be unlikely to have a significant effect upon features of the adjacent Hiraethog Site of Special Scientific Interest (SSSI).

⁴² Letter dated 24 August 2016

⁴³ Letter dated 1 June 2017

133. Bats were found to utilise the site for commuting and, in some areas, foraging. NRW would therefore support the proposed mitigation involving monitoring and curtailment of turbines. Although the mitigation is lacking in detail and substantial information would be required to ensure significant adverse effects upon the bats would be avoided, NRW is satisfied that this could be satisfactorily addressed by condition. The mitigation proposed with regard to other protected species is considered to be satisfactory and can be treated in the same way.
134. Provided that the proposed mitigation is implemented NRW have no objection on grounds of flood risk. NRW recommends that a condition be imposed requiring the approval of a scheme for the disposal of surface water and that run-off should not exceed existing run-off rates. Details of adoption and management should also be submitted to ensure the system remains effective for the lifetime of the development.
135. There are several private water supplies within 2km of the site which are all confirmed to be outside of the area of hydrogeological influence of the wind farm.

Ministry of Defence

136. The Ministry of Defence confirmed that it had no objection to the proposal but, in the interests of air safety, requested that the turbines be fitted with aviation lighting.

Campaign for Protection of Rural Wales

137. The Campaign for the Protection of Rural Wales (CPRW) confirmed its continued opposition to the proposal on the grounds that the proposed turbines would break the skyline in views towards Snowdon from Moel Famau. This was a reason a previous appeal was dismissed on land at Gorsedd Bran.

Other interested parties

138. Forty letters of objection were received from interested parties in respect of the appeal. In addition to the matters already outlined the following concerns were also raised:
- The proposed location to the south west of Nantglyn and in line with the prevailing wind would result in the creation of a horseshoe of turbines around the village with the potential for increased noise pollution;
 - The effect on private water sources for local households which come from local springs;
 - Associated heavy and industrial traffic on the A543;
 - Cumulatively the existing on-shore and off-shore wind farms exceed the targets for renewable energy;
 - The effect on tourism and the viability of local businesses including The Sportsman's Arms.

Conditions

139. The Appellant provided a list of suggested conditions⁴⁴ which have been reviewed by the Council⁴⁵ and in addition to the specific concerns relating to noise set out earlier, the following matters have been raised. Apart from the noise conditions, the Appellant has not offered any observation on the Council's comments.

⁴⁴ Appellant's Bundle 1 Tab 2 Section 10

⁴⁵ Council's Statement of Case Section 8

140. Given the proximity to dwellings and other sensitive receptors including SAM the Council considered that the micro-siting allowance of 50m suggested in condition 4 would be excessive and that an allowance of 20m would be more reasonable.
141. The Council considered that the scope of the Construction Method Statement (CMS) set out in suggested condition 11 is inadequate. An alternative form of wording has been proposed which includes measures to reinstate planting on the approach tracks; the disposal of surface and foul water; the monitoring of private water supplies; a Construction Traffic Management Plan (CTMP) including HGV routes; traffic signing and recording of the existing condition of the site. The inclusion of the disposal of surface and foul water would negate the need for suggested condition 23.
142. Suggested conditions 12 and 13, recommended by WG Highway Authority, were considered by the Council to be imprecise in terms of the trigger for the submissions of details and suggested alternatives have been put forward. A similar comment was made about condition 32. Condition 13 relates to highway condition surveys and as the Council's alternative form of wording includes remediation works suggested condition 14 would not be necessary.
143. The Traffic Management Plan (TMP) required by suggested condition 15 only includes Abnormal Indivisible Load (AIL) traffic. The Council considers there would be merit in requiring an AIL specific TMP provided that a separate TMP is submitted for non-AIL construction traffic either as a stand-alone condition or as suggested in the revision to the CMS required by condition 11. An alternative form of wording of condition 15 is also proposed. Suggested condition 16 seeks to control AIL movements during decommissioning. The Council suggests that this condition 16 could be omitted and the requirement be included within condition 30. The condition should also be reworded to give control to the Council rather than WG Highway Authority. This comment is relevant to other conditions including suggested condition 18.
144. Condition 17 requires the developer to demonstrate rights of access to works which are not part of the highway network. The Council does not consider that this condition is appropriate as it relates to matters outside planning control and does not meet the relevant tests. The need for condition 19 and the requirement to undertake a public road condition survey is also questioned by the Council as it appears to duplicate suggested conditions 12, 13 and 14. It is also not clear what suggested condition 24 is seeking to control. The condition only allows the tipping of uncontaminated natural excavated materials on the site. However, no tipping is proposed. If the condition is to control the dispersal of material won from the borrow pits which is not subsequently used on the site the wording needs to be more specific so that it relates clearly to the material extracted from the borrow pits and not other aggregate imported to the site.
145. Felling and the management of surface water runoff are covered in suggested condition 27. The condition also relates to impact on private water supplies during the construction phase. The Council considers that this element would be better included as a provision of the CMP and for condition 27 to focus on tree felling operations only and incorporate the requirements set out in suggested condition 26. A form of wording has been suggested by the Council. The wording of suggested condition 28, in respect of a site assessment of water features, is considered to be unsatisfactory. The Council proposed that, for the avoidance of doubt it should be a pre-commencement condition and should include the requirement to submit a scheme of works which encompass avoidance, mitigation and compensation measures where the assessments identify impacts are likely. The condition also needs to give control to the Council not NRW.

146. There could be considerable construction vehicular movements taking place prior to work on the turbines commencing and it would be essential to ensure vehicles can safely manoeuvre and park within the site and clear of the highway prior to the commencement of the development. The Council therefore considers suggested condition 33 should be a pre-commencement condition. The Council also considers that suggested condition 36 in respect of archaeological mitigation and condition 41 in respect of a habitat management plan should be pre-commencement. The latter should also cover the decommissioning phase as these works and those of restoration may also impact on habitat and species.
147. The Council states that it would defer to Cadw as to whether the 30m protection zone around archaeological sites proposed in suggested condition 37 would be sufficient. The Council also suggests that the condition could be consolidated with condition 36 as it makes reference to a buffer zone which is an archaeological protection/mitigation measure.
148. Since the digital switchover the need for a television reception study detailed in suggested condition 40 has been questioned by the Council. However, in the absence of a response from the telecommunications industry to the application the Council would not object to its inclusion. Suggested conditions 41 and 42 relate to bats. The Council considers that the conditions should be combined and made more precise by requiring the submission and approval of the surveillance strategy prior to the turbines being brought into use.
149. The Council's concerns regarding noise have already been outlined and as a consequence the Council disagrees with suggested conditions 44 and 43 and has put forward alternative conditions which would satisfy its concerns. The Council has also suggested a condition in respect of shadow flicker on the grounds that the exact model of turbine has not been specified and the dimensions of the component parts on which the assessment of shadow flicker in the ES was based could alter. Moreover suggested condition 4 allows for micro-siting. There is therefore the potential for the development to cause shadow flicker at a nearby property and it would therefore be reasonable and necessary to apply a condition. A form of wording has been proposed.

Conclusions

The numbers in square brackets indicate the relevant paragraphs of the report.

150. I consider the main issues in this case are the effect of the development on:
- landscape character and visual amenity with particular reference to the views of Snowdonia from Moel Famau;
 - the residential amenity of the occupants of properties in the locality in respect of outlook; and
 - the setting of scheduled ancient monuments in the local vicinity.

Preliminary Matter: Gorsedd Bran Appeal Decision

151. There is no dispute between the parties that the GBWF appeal decision is a material consideration in the determination of the current appeal, the dispute arises over the weight which should be attributed to it. The appeal proposal is significantly smaller in terms of the number, height of the turbines and the size of the site than the GBWF scheme. There has been a change in local and national policy with the adoption of the LDP and the revision of the relevant section of PPW in edition 4 which has been carried through to the current edition. There has also been the introduction of energy NPS which state that they are likely to be a material consideration in applications which fall to be determined under the 1990 Act. [11, 16, 27, 28, 29, 37, 38, 64, 65, 66]

152. I am in agreement with the parties that the GBWF decision is a material consideration. Whilst it is for the decision maker to decide what weight should be accorded to it in determining the appeal, from the differences highlighted in the evidence and particularly the physical differences between the schemes, I do not consider the significant weight attributed to it by the Council is justified. I therefore consider that limited weight be attributed to the GBWF decision in the determination of the appeal and I have applied such weight in reaching my recommendation. [39, 64]

Landscape and Visual Amenity

153. The primary purpose of the AONB is to conserve and enhance the natural beauty of the area. The features and qualities that make up the special character of the AONB are identified in the CR&DVMP. With regard to landscape character and quality these include space and freedom in relation to access to the landscape; the uninterrupted and extensive views from high places within it; and a sense of belonging and attachment to the landscape. Moel Famau is listed as an iconic visitor and cultural attraction within the AONB and the Jubilee Tower, at its summit, is a well-known and well visited viewpoint. One of the routes to the summit from the car park on Bwlch Pen Barras follows the national trail, Offa's Dyke Way, which is recognised as making the AONB particularly accessible. [7, 40, 71, 72, 73]

154. The ES assessed the impact of the proposal on views from the Jubilee Tower and concluded that the effect on visual amenity would be medium. The proposed turbines, at a distance of approximately 19km, were predicted to be a noticeable additional feature especially during good weather and at times of good visibility it was anticipated that the movement of the blades would be discernible but not prominent. They would be viewed within a very large and open landscape and would occupy only a small proportion of the overall field of that view. Furthermore the turbines would not break the skyline and when viewed from the Jubilee Tower they would not be seen against the peak of Snowdon. However, at least three of the proposed turbines would encroach into views of the Snowdon Horseshoe and be visible against the backdrop of Y Lliwedd. The turbines would appear as a visual distraction to the view of one of the main peaks of the Snowdon range, devalue the vista and result in an unacceptable degree of harm to a view of acknowledged importance. [41, 42, 44, 74, 75, 78, 80, 161, 167]

155. The proposal would form a continuation of the series of wind farm developments within SSA-A extending the existing northern limit set by TMWF, BWF and CFWF. From Moel Famau the turbines of Moel Maelogen are also seen against the backdrop of the mountains north of Snowdon. The separation distance between these turbines and the schemes to the south appears limited and would be reduced by the appeal proposal. It is accepted that the combined operational and consented wind turbine developments within and adjoining SSA-A have and will continue to affect the special qualities and features of the AONB. Nevertheless the appeal proposal would extend the existing wind turbine dominated landscape between the AONB and SNP further north, thus having a greater impact on the key views from the AONB, particularly those of the Snowdon Horseshoe. [8, 9, 41, 44, 75, 77, 80, 130]

156. In walking Offa's Dyke Way between Bwlch Pen Barras and the summit of Moel Famau, a distance of approximately 2km, the main view is towards Snowdonia. It is accepted that the proposed turbines would form an additional component within a very broad panoramic view. However, the extension of the turbines further north in the landscape would result in the Snowdon mountains appearing to be fenced in by wind farm development. This would not only be detrimental to the visual amenity of

walkers, it would also be harmful to the setting of Snowdon and the important special qualities and features of the AONB which underpin the designation of the area as a nationally protected landscape. [40, 41, 42, 76, 77, 78, 80, 130]

157. It is accepted that the effect of the scheme on the view of the Snowdon Horseshoe would be significantly less than that described by the Inspector in the GBWF decision, in that the turbines in that case encroached further north and would have broken the skyline to either side of the peak of Snowdon. Nevertheless the key view for walkers is towards Snowdon and the development would create an unacceptable distraction to that view. [29, 41, 42, 77, 78]
158. Although in respect of the CFWF the Examining Inspector considered that there would be harmful changes westward from the AONB, it was considered that the acceptance of significant visual and landscape impacts set out explicitly in the energy NPS and in the designation of the SSA was a matter to be weighed in favour of granting consent. Whilst the CFWF is significantly larger than the appeal proposal in terms of the number and height of the turbines and they would occupy a greater proportion of the view from the AONB, the turbines would not be in line with the Snowdon Horseshoe in views from Moel Famau and its northern extent is contained within TMWF and BWF. The main view for many walkers on Moel Famau is towards Snowdon and not to the south of the range in the direction of CFWF and whilst the turbines together with those of other operational and consented schemes create a dominant feature in the view from Moel Famau, unlike the appeal proposal, they do not encroach into the view of the Snowdon Horseshoe. [41, 42, 43, 77, 78, 79, 80, 81, 82]
159. It is therefore concluded that views of the proposed turbines against the backdrop of the Snowdon Horseshoe would harm the views of this significant feature in the SNP from Moel Famau, to the detriment of the landscape and the visual amenity of receptors and the special qualities of the AONB, contrary to Policies VOE 9 and VOE 2 of the LDP. Although in TAN 8 there is an implicit objective to accept significant change in landscape character, I consider that the degree of change that would be brought about by the development to the landscape and as a consequence to visual amenity would not be consistent with the aims of TAN 8. [13, 14, 19, 40, 44, 75, 79, 130]

Residential Amenity

160. The area to the north and east of the site contains a relatively large number of dwellings scattered across the countryside which have the potential to experience significant visual effects from the proposal. The RVAA assessed the eleven properties which lie within 2km of the site. Due to the screening effect of topography and vegetation and the removal of turbine T6, three properties would have views of three turbines. From each of these properties two of the turbines would be visible at blade tip height and in respect of the remaining turbine in each case two would see the hub and one the tower. A further property would see the blade tip of one turbine. The RVAA found that with the exception of The Sportsman's Arms, the proposal would have no significant effects on the residential amenity of the occupants of the properties assessed. [6, 49, 50, 85]
161. In respect of The Sportsman's Arms all seven turbines would be visible and the closest would be approximately 1.25km from the property. The wind farm would therefore be a prominent feature, especially in the outlook from southeast facing rooms and outside areas. The effect on residential amenity was assessed in the RVAA as

- significant and adverse. The RSM considered the effect the removal of T6 would have on the residential amenity of the property and predicted that the visual effects would remain high and significant, although the angle of view which the turbines would occupy would be reduced. [49, 85, 86]
162. With regard to the cumulative effect of the development with other operational and consented wind farms on The Sportsman's Arms, the appeal proposal would be closer to the property than TMWF, BWF and CFWF and it would extend the wind farm landscape further north. The RVAA considered that turbines would occupy a significant portion of the visible ridgeline to the extent that they would dominate the view from the property and its outside areas. The cumulative effect was considered to be significant and adverse. [8, 9, 85]
163. It is noted that the Council contends that from Rhiwiau and Awel y Brenig, five of the proposed turbines would be visible. These properties were not assessed as part of the RVAA as they lie outside the study area agreed with the Council. The ZTV does confirm that this number of turbines would be visible. However, it does not take account of intervening vegetation which would limit the views. Nevertheless the development would comprise large structures on an exposed hill top location and given the extent to which they would be visible from The Sportsman's Arms, I consider the proposal would appear overbearing in the outlook from this property. [50, 85, 86]
164. The Sportsman's Arms is currently occupied by tenants and the tenancy expires in a few months. Furthermore the terms of the option the Appellant has on the property restrict the creation of further tenancies without its consent and secures the long term financial involvement of the owner. Whilst I do not consider this is sufficient to justify a development which would have an overbearing impact on the residential amenity of the occupiers of the property, I acknowledge that these conditions would not make the property uninhabitable. [6, 49, 85]
165. The Inspector in his decision on the GBWF commented that the cumulative effect of that scheme together with other existing and consented turbines would result in the local community having the appearance of being surrounded by turbines on all high ground to the south and west. Although the Council considered that the physical impact of the appeal proposal would be less than the GBWF, it nevertheless felt that there would not be a significant reduction in the impact on the surrounding community identified by the Inspector in his decision on the GBWF. [29, 46, 87]
166. However, there are significant differences between the two schemes. In the appeal proposal the number and height of the turbines are less; the site boundary is smaller; it does not extend as far north; and the topography is lower. All these factors would result in fewer properties having views of the development. I acknowledge that in some views from the northeast the turbines would be visible on high ground to the west and TMWF, BWF and CFWF would be seen to the east⁴⁶. Visually the proposal would extend the turbine landscape further west and the local community may have the perception of being surrounded by turbines. However, from the dwellings closer to the site which were assessed as part of the RVAA, only the blade tip of one turbine would be seen from one property. On this basis I do not consider that the properties would appear surrounded by turbines. [37, 47, 48, 64, 66, 87, 88]
167. There will always be significant effects from windfarms. The CFWF decision endorsed the principle that harm to residential amenity is found to occur when turbines

⁴⁶ As demonstrated in ES Figure 6.37a

are present in such number, size and proximity that they represent an unpleasantly overwhelming and unavoidable presence in main views from the house and garden to the extent that the property is likely to become unattractive and thus an unsatisfactory place to live. However, the report went on to state that even where a change of view could be described in these terms, such effects would fall to be weighed in the balance with the wider public benefits which the development is designed to achieve. [51, 52, 83, 84, 90]

168. It is therefore concluded that the proposed development would have a significant and adverse effect on the residential amenity of The Sportsman's Arms to the extent that in the outlook from the property the proposal would appear unacceptably overbearing, contrary to Policy VOE 9 (ii) of the LDP. This weighs in the balance against the appeal. [14, 53, 89]

Historic Environment

169. The Council's concerns centred on the impact on the development which, when considered alongside other existing and consented schemes, would be likely to constitute a significantly adverse impact on the settings of prehistoric funerary and ritual monuments in the landscape. The setting of an historic asset includes the surroundings in which it is understood, experienced and appreciated. The extent of the setting is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance, or may be neutral. Setting is not an historic asset in its own right but has value derived from how different elements may contribute to the significance of an historic asset. The importance of setting lies in what it contributes to the significance of an historic asset. In respect of the appeal proposal it is the intervisibility between the Bronze Age funerary and ritual sites that contribute to the setting of the SAM and their significance. [7, 23, 24, 25, 26, 54, 56, 91, 96, 105]

170. The Council, having taken account of Cadw's comments, was not satisfied that the submitted information demonstrated that the development would not have a significant adverse impact on the SAM. The submitted information included the assessment of the effect as part of the ES which was supplemented by the RSM. Both documents were subsequently reviewed by SLR in the light of Cadw's continuing concerns. As a result of the SLR report the Appellant submitted a series of photomontages of the SAM most likely to be harmed by the development. It is acknowledged that the initial assessment was based on bare earth data and it would have been helpful if the cultural heritage section of the ES could have been reviewed in the light of the additional information. However, I consider that there is sufficient evidence on which to reach a reasoned decision. [17, 22, 54, 55, 92, 103, 105, 106, 108, 109, 120, 121, 122, 127, 128]

171. In its response to the amended scheme following the removal of T6 and having had regard to the RSM Cadw was of the view that the development would have a significant adverse impact on the setting of Bwlch-Du Round Barrow (DE085); Circular Platforms northwest of Hen Ddinbych (DE087); Rhiwiau Round Barrow Cemetery (DE100); Round Cairn 648m northeast of Tan-Y-Foel (DE157); Gorsedd Bran Round Barrows (DE168) and Round Barrow 828m west of Cae-du (DE172). When other existing and consented schemes in the area are taken into account, Cadw considered the impact would be likely to constitute a significantly cumulative adverse impact on the settings of the prehistoric funerary and ritual monuments in this landscape. [54, 94, 95, 97, 121]

172. Bwlch-Du Round Barrow (DE085) and the Circular Platforms northwest of Hen Ddinbych (DE087) lie to the east and southeast of the site. Seen as a group the RSM⁴⁷ considers their setting could be taken to include not only the immediately surrounding landscape, but also other related monuments such as Gorsedd Bran Round Barrows (DE168) which overlook the complex from the northwest. The intervisibility of the monuments is important in considering the group as a whole and whilst the development would not directly impede views the turbines would be visually intrusive in views towards DE168. However there would be no lines of sight between either DE085 or DE087 and the northeast pair of barrows of DE168⁴⁸. [97, 101, 102, 103, 108, 121, 123]
173. In views towards the southwestern pair of barrows of DE168 from DE085, turbine T8 would be very close to the line of sight and from DE087 all seven turbines would be clearly visible in the view. It is accepted that there is the potential with careful micro-siting to reduce the impact of T8 on the view from DE085. Nevertheless the proposal would affect the setting of these SAM and in particular the intervisibility between them and the southern pair of barrows of DE168. I agree with Cadw that the development would have a significant adverse effect on the setting of these assets. [97]
174. Rhiwiau Round Barrow Cemetery (DE100) consists of four Bronze Age round barrows sited on a central ridge, and their setting takes in the ridge in a moorland landscape. Whilst views towards the barrows would be unimpeded by the development, in views to the southeast towards DE168 four turbines would be visible of which two would be barely seen⁴⁹. Given the extent of the turbines which would feature in the views based on bare earth data, which does not take account of the screening effects of properties and vegetation, I am of the opinion that the proposal would only result in slight changes to the setting of DE168 when viewed from DE100. On this basis I agree with the Appellant that the resulting level of significance would be moderate/slight. I also accept that the cumulative effects would be slight. [97, 98, 101, 103, 108, 121, 124, 125, 126]
175. Round Cairn 648m northeast of Tan-Y-Foel (DE157) sits in a prominent position in open moorland and its setting takes in the ridge on which it stands. Whilst views towards the barrow would be unaffected, in views from it towards the southeast the turbines would be visible above the skyline⁵⁰. These views would also encompass the turbines of other operational and consented wind farms. The proposed turbines would have a cumulative impact by introducing an additional intrusion into the overall panorama visible from the barrow. Whilst the evidence indicates that only the tips of the turbines of CFWF and BWF would be visible behind the proposed turbines, I consider that the development would detract from the views towards DE168. I agree with Cadw's assessment of the impact on this SAM as moderate, with a moderate/large level of significance. [97, 99, 101, 121, 125, 126]
176. Gorsedd Bran Round Barrows (DE168) are the closest designated asset to the proposed development and the nearest turbine (T5) would be approximately 540m to the south. It has already been established that there is no intervisibility between the northeast pair of barrows with DE085 and DE087. The visual impact on the settings of these assets is therefore restricted to the effect the turbines would have on views

⁴⁷ Appellant's Bundle 2.A Tab 5 paragraph 5.2.1

⁴⁸ As demonstrated in RSM Appendix D Figures 13.4a(i) and 13.4b(i)

⁴⁹ As demonstrated in RSM Appendix D Figures 13.4c(i)

⁵⁰ As demonstrated in RSM Appendix C Figures 6.38a(i)

between the southwest pair of barrows of DE168 and the other two SAM. [97, 100, 101, 102, 103, 108, 121, 122]

177. Due to its proximity to the SAM the proposal would have a major visual impact on the southernmost pair of barrows, affecting views towards them from the southwest as well as views from the barrows towards the south⁵¹. The barrows are presently screened by mature forestry which lies outside of the appeal site and is due to be felled. In combination with the clear felling which would take place as part of the proposal the views of the SAM would be opened up. [101, 103, 107, 108, 122]
178. There is the potential, in time, for replanting on the land around the barrows and outside the site to again restrict the view. However, the heathland habitat proposed in the Habitat Management Plan would become established over the 25 year lifetime of the development making it more unlikely that the commercial replanting of trees would take place on the appeal site. There is therefore the potential that the development would in the long term result in increased opportunity for intervisibility between the assets. Although the removal of trees is recognised as a measure which can enhance the setting of an asset, the effect of the turbines also has to be considered. [101, 103, 107, 108, 124, 126]
179. The level of significance of the impact has been assessed as large/very large for the closest barrows and moderate/large for the further pair. There is also the potential for cumulative impacts with operational and consented wind farms to the southwest, the magnitude of which has been assessed as major and its significance large/very large. I accept this assessment and on this basis I consider the overall impact of the development on DE168 would be significant. [101, 122]
180. The topography of the land on which Round Barrow 828m west of Cae-du (DE172) is sited dictates that the main visual aspect is along the ridge towards the northeast. However there are uninterrupted views to the southeast and towards the development. The removal of turbine T6 may benefit the view from the SAM, nevertheless the remaining turbines would still introduce an additional intrusion into the overall panorama visible from the barrow. There would also be other turbines visible. I am not persuaded by the evidence that the magnitude of the impact would be minor or that the resulting level of significance both individually and cumulatively would be moderate/slight. I consider the significance of the effect would remain moderate/large. [122, 126]
181. In conclusion it is acknowledged that the development would be time limited and would not have significant effects on the setting of all of the SAM in the surrounding area. However, it would have significant adverse effects on several SAM which, when considered alongside other existing and consented schemes would likely constitute a significantly adverse effect on the settings of the prehistoric and funerary and ritual monuments in the landscape, contrary to Policy VEO 1 of the LDP, PPW and TAN 24. [12, 16, 25, 56, 57, 109, 121]

Other material considerations

Target Capacities for SSA-A

182. Despite the initial differences regarding the target capacity figures for SSA-A, the parties are now agreed that the maximum capacity figure is 212 MW as published in

⁵¹ As demonstrated in RSM Appendix D Figures 13.4d(i)

2011. Although both parties were initially agreed that the consented Nant Bach and Derwydd Bach wind farms were unlikely to come forward, the Council has now indicated that Derwydd Bach may come forward in the long term and the principle of Nant Bach wind farm has been established. Whilst there is no substantive evidence, it is known that the permission in respect of Derwydd Bach is extant and it would appear that the consent in respect of Nant Bach has lapsed. [20, 34, 67]

183. In comparing the potential total capacity figure given in the TAN 8 Database 2016 of 237 MW with the revised TAN 8 target figure of 212 MW, the Council is correct that the target figure would be exceeded. However, as advocated by the Appellant, if allowance is made for possibility that Nant Bach and Derwydd Bach wind farms would not come forward and applying a reduced capacity figure for the appeal scheme of 17.5 MW, the total potential capacity figure is reduced from 237 MW to 184 MW. This is well within the maximum capacity figure of 212 MW issued in 2011. [20, 21, 34, 35, 68]

184. It is known that the permission on Derwydd Bach wind farm is extant and although it may not be built out in the short term, I consider that it should be included as potential capacity. Although there is no substantive evidence in respect of the permission for Nant Bach wind farm, it seems highly probable that the permission has lapsed and a new permission would need to be sought for development to take place. The potential capacity has therefore lapsed along with the permission. On this basis even if the capacity of Derwydd Bach wind farm is brought back into the equation, the total potential capacity figure is below the maximum target for SSA-A. [35, 69]

Noise

185. Interested parties raised concerns regarding the potential for noise pollution from the development which cumulatively with other schemes and due to the prevailing wind direction would affect the living conditions of residents. Given the location of the site within SSA-A and the proximity of other operational and consented wind farms, it is possible, if the noise levels are not set appropriately, that certain wind conditions may give rise to unacceptable cumulative noise levels at some properties. The most affected properties were identified as Cwm y Rhinwedd, The Sportsman's Arms, Wern Uchaf and Hafod Caradoc. [58, 138]

186. However, the ES concluded that for all receptors neighbouring the proposed development, noise levels would satisfy ETSU-R-97 requirements. Notwithstanding this there is a need to manage noise levels through the imposition of appropriate conditions and it is with regard to the noise levels specified in the conditions that the parties are in dispute. The Council considered it necessary to ensure noise levels would be no more than those predicted in the ES plus a 2dB margin whereas the Appellant suggested the limit for Cwm y Rhinwedd would be 5dB(A) above day time limits; a flat 45dB(A) across all wind speeds for The Sportsman's Arms; and a flat 35dB(A) across all wind speeds for all other residential properties. The Council considered that the imposition of noise levels 5dB above combined day and night background noise levels would be preferable to those suggested by the Appellant. [58, 59, 110, 111]

187. ETSU-R-97 recommends that for residential properties external noise limits are set within the range of 35 to 40dB or 5dB(A) above background noise, whichever is the greater. These limits are set at a level which protects amenity whilst providing reasonable flexibility for developers in the final turbine procurement. The noise limits suggested by the Appellant satisfy ETSU recommendations. It is also noted that the

TMWF, Wern Du and CFWF all have a daytime limit of 40db. I am therefore satisfied that the approach taken by the Appellant is entirely reasonable. [111, 112]

188. The Council does not consider it appropriate to apply the higher noise levels in respect of The Sportsman's Arms as it has a duty to protect the amenity of the property in perpetuity. However, the Appellant has confirmed the basis on which The Sportsman's Arms is occupied and I am satisfied that it is a financially involved property. Furthermore the proposed noise limit is in line with ETSU-R-97 recommendations regarding financially involved properties. On this basis I consider that it would be appropriate to set the noise level limits for The Sportsman's Arms at the higher limit. [58, 60, 61, 62, 111]

Water Sources

189. Several properties within the local area have private water supplies and concerns were raised with regard to the potential effect the development would have on the quality and continued supply of water. There is no evidence that the development would interrupt or affect the quality of the water supply currently enjoyed by the occupants of local properties. Furthermore conditions are suggested which would require the monitoring of private supplies and arrangements to mitigate impacts should any arise as a result of the development. [119, 135, 138]

Highway Safety

190. Whilst in its operational phase there would be some traffic associated with the maintenance of the wind farm, during the construction and decommissioning phases large volumes of traffic would be generated. However, there is no evidence of any significant concerns regarding highway matters subject to the co-ordination of operations through a Traffic Management Plan. This is a matter which can be addressed by condition. [116, 138]

Tourism and the Local Economy

191. The area benefits from tourism and concerns were raised by interested parties regarding the effect the development may have on visitor numbers and as a consequence the viability of local tourism related businesses. However, it is generally acknowledged that wind farms have a limited effect on visitor activity and most tourists are not discouraged from visiting an area because of its proximity to wind farms. Furthermore the restricted visibility of the proposed turbines from many locations in the wider landscape would result in the development having a negligible effect on local tourist attractions. [118, 138]

Conditions

192. I have considered the list of 44 suggested conditions submitted by the Appellant and the comments made by the Council in the light of Welsh Government Circular 016/2014 *The Use of Planning Conditions for Development Management*. In the event that the Welsh Ministers decide to allow the appeal, I submit that it would be reasonable and necessary to impose the conditions set out in the schedule attached to this report as Annex A. [139]
193. In the light of the Council's comments and in the interests of precision and to avoid duplication I have reworded several conditions and combined others. I have accepted the Council's submissions in respect of the reduction of micro-siting allowance in suggested condition 4; increasing the scope of the matters covered in suggested condition 11 and the consequent omission of suggested condition 23. I consider that

suggested condition 17 regarding access to the highway network is unnecessary; and parking for construction traffic in suggested condition 33 is required earlier than work starting on the turbines as suggested in condition 41 in respect of habitat management. As the development does not propose an access onto the trunk road, suggested condition 18 is not necessary. I have already covered noise as a separate matter. [140 141, 143, 144, 153, 156, 188]

Planning Balance

194. The planning system has an important role in delivering renewable energy schemes in order to meet the WG target for energy to be derived from renewable resources and the proposed development would contribute towards that target. Whilst TAN 8 directs large scale developments towards the SSA and there is an implicit objective within it to accept significant change in landscape character, it recognises that not all the land within the SSA may be environmentally suitable for major wind power proposals. Furthermore the SSA have a finite environmental capacity, although the evidence indicates that the development would not result in the maximum levels for SSA-A being exceeded.
195. A balance needs to be struck between the benefits of generating electricity from renewable onshore wind and the identified impacts of the scheme on the landscape and visual amenity, residential amenity, the setting of the SAMs and other matters raised in evidence.
196. I have concluded that the development would cause harm to the landscape and visual amenity and in reaching this conclusion I have weighed in the balance the implicit objective to accept significant change to the landscape character of the SSA. With regard to residential amenity, I have concluded that the development would have an unacceptable overbearing impact on the outlook from The Sportsman's Arms. However, it is a financially involved property and the effect of the development on residential amenity would not make the property uninhabitable, which would reduce the weight attributable against the proposal.
197. Although TAN 24 is clear that the public benefit of taking action to reduce carbon emission, or to adapt to the impact of climate change, should be weighed against any harm to the significance of historic assets, I nevertheless consider that the significant harm to the setting of several SAM I have identified carries substantial weight against the appeal.
198. I am satisfied that other material planning considerations raised can be satisfactorily addressed by planning conditions.
199. On balance I consider that the positive benefits of renewable energy and the location of the site within SSA-A are not sufficient to outweigh the harm in respect of the landscape and visual amenity, residential amenity and harm to the historic environment. The evidence persuades me that the balance is not in favour of the appeal and on this basis I consider that the appeal should be dismissed.

Recommendation

200. For the reasons given above, and having had regard to all other matters raised, I therefore recommend that the appeal be dismissed.

Kay Sheffield
INSPECTOR

Documents

1. In addition to the comprehensive list of appeal documents contained within the Appellant's submission files, the Appellant also submitted:
 - i) Final Comments dated 8 June 2017; and
 - ii) Response to Inspector's queries with regard to the evidence dated 3 July 2017
2. Denbighshire County Council submitted:
 - i) Statement of Case and supporting appendices; and
 - ii) Response to Inspector's queries with regard to the evidence dated 29 June 2017
3. Letters from Interested Parties include:
 - i) Cadw letter dated 1 June 2017
 - ii) Natural Resources Wales e-mail dated 23 May 2017
 - iii) Ministry of Defence letter dated 16 May 2017
 - iv) Campaign for the Protection of Rural Wales letter dated 4 May 2017
 - v) Letters from local residents

Annex A

Schedule of Conditions

- 1) The development shall begin not later than five years from the date of this decision.
Reason: To comply with the provision of Section 92 of the Town and Country Planning Act 1990

 - 2) The development shall be carried out in accordance with the following approved plans and documents: Planning, Design and Access statement March 2015; Environmental Statement, Volume 1 of 4: Written Statement; Environmental Statement, Volume 2 of 4: Supporting Figures and Appendices; Environmental Statement, Volume 3 of 4: Visualisations (Viewpoints 1-24); Environmental Statement, Volume 4 of 4: Non-Technical Summary; Supplementary Environmental Information, Volume 1 of 2; Supplementary Environmental Information, Volume 2 of 2; and Rationale for Scheme Modification dated 22 December 2015.
Reason: For the avoidance of doubt

 - 3) The permission hereby granted shall endure for a period of 25 years from the date when electricity is first exported from the development. Written confirmation of the first export date shall be sent to the local planning authority within one month of the first export date.
Reason: For the avoidance of doubt and to establish the duration of this permission.

 - 4) The location of the turbines and ancillary structures such as anemometer mast, and the access tracks, shall be in the positions indicated on the submitted plans, subject to variation of the indicated position of any turbine or any track on the plans by up to 20 metres, or where the written approval of the local planning authority has been given to a variation arising from details approved in relation to other conditions of this permission. Any variation greater than 20 metres shall require the written approval of the local planning authority.
Reason: in the interests of minimising environmental impact.

 - 5) No work on the substation building shall commence until the written approval of the local planning authority has been obtained to its precise location and the external wall and roof materials. The development shall be carried out strictly in accordance with the approved details
Reason: In the interests of visual amenity.

 - 6) This permission relates solely to the erection of 3 bladed wind turbines as described in the application plans and drawings with a maximum height to blade tip of 102m from original ground level. No turbines shall be erected until the prior written approval of the local planning authority has been obtained to the type and make of turbines to be used. The development shall be carried out strictly in accordance with the approved details.
Reason: In the interests of visual amenity.

 - 7) All turbine blades shall rotate in the same direction.
Reason: In the interests of visual amenity.

 - 8) The finish of all the turbines shall be semi-matt and their colour shall be approved in writing by the local planning authority before the turbines are erected on site.
Reason: In the interests of visual amenity.
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- 9) No part of the development shall display any name, logo, sign, advertisement or means of illumination, other than those required by law or good practice for health and safety reasons, without the prior written approval of the local planning authority.

Reason: In the interests of visual amenity.

- 10) All electricity and control cables between the turbines and the substation shall be laid underground and alongside tracks which are constructed on the site as part of the development unless otherwise agreed in writing with the local planning authority.

Reason: In the interests of visual amenity.

- 11) No work of construction, laying out of access tracks, or work on the construction compound shall be commenced until a Construction Method Statement has been submitted to and approved in writing by the local planning authority. The statement shall include provisions relating to:

- i) Construction and reinstatement of the temporary site compound;
- ii) Construction and reinstatement of all internal tracks including measures to reinstate planting on approach tracks;
- iii) Soil stripping management;
- iv) The investigation of any disturbance to peat within the footprints of the tracks and structures, to inform micro-siting to minimise peat loss;
- v) The disposal of surface and foul water;
- vi) Pollution Prevention and Control Plan, in particular to demonstrate steps to prevent impacts on sources of private water supplies; and proposals for monitoring, mitigating and remedying any degradation in the quality and quantity of water supplies;
- vii) Construction Traffic Management Plan including HGV routes, traffic signing along public roads; and
- viii) Recording the existing condition of the site.

The development shall be carried out in accordance with the approved Construction Method Statement.

Reason: To ensure the safety of the highways affected and minimise environmental effects

- 12) No work shall take place until the following details have been submitted to and approved in writing by the local planning authority:

- i) An assessment of the capacity and impact on all structures along those parts of the highway network which shall be utilised during the construction of the development including bridges, culverts, retaining walls, embankments; and
- ii) Details of any improvement works required to such structures as a result of construction of the development

The development shall be carried out in accordance with the approved details.

Reason: To ensure the safety of the highways affected

- 13) Prior to the commencement of the development, a scheme for the recording of existing public road conditions shall be submitted to and approved in writing by the local planning authority. The scheme shall specify:

- i) The frequency and timing of condition surveys to be undertaken prior to, during and on completion of the development;
- ii) The mechanism for reporting the findings of the condition surveys to the relevant highway authority; and

- iii) The procedure for undertaking any necessary remediation works should any damage directly attributable to the development to parts of the highway network occur during the construction phase.

The development shall be carried out in accordance with the approved scheme.

Reason: To ensure the safety of the highways affected

- 14) No Abnormal Indivisible Load (AIL) deliveries shall be made to the site until a Traffic Management Plan (TMP) for AIL has been submitted to and approved in writing by the local planning authority. The TMP shall include:
 - i) Proposals to minimise any impact from transporting AIL from their point of entry to the trunk road network to the site on the safety and free flow of trunk road traffic;
 - ii) Evidence of trial runs that mimic the movement of the worst case AIL along the access route;
 - iii) Number and size of AIL, including loaded dimensions and weights;
 - iv) Number and composition of AIL convoys, including anticipated escort arrangements;
 - v) Methodology for managing trunk road traffic during AIL deliveries, including identification of passing places and holding areas as necessary;
 - vi) Convoy contingency plans in the event of incidents or emergencies;
 - vii) Estimated convoy journey durations and timings along the route, including release of forecast traffic queues;
 - viii) Swept path analysis modelling the movement of the worst case AIL at all potential horizontal and vertical constraints along the access route;
 - ix) Proposals for the temporary or permanent modification of any affected street furniture along the access route and details of how this would be managed;
 - x) Plans for the reinstatement of any temporary works after completion of the construction phase;
 - xi) Land ownership must be clarified on all drawings showing proposed highway modifications. The developer shall be responsible for the acquisition and reinstatement of all third party land including re-instatement of boundary features;
 - xii) Proposals to liaise with all relevant stakeholders and members of the public regarding construction traffic and AIL movements; and
 - xiii) Consideration of the cumulative impact of other wind farm schemes proposing to use all or part of the same access route.

The development shall be carried out in accordance with the approved TMP.

Reason: in the interests of highways safety and amenity.

- 15) No movement of traffic associated with the maintenance and decommissioning of the development shall take place until a Traffic Management Plan (TMP) has been submitted to and approved in writing by the local planning authority and thereafter the approved TMP shall be implemented.

Reason: To ensure the safety of the highways affected.

- 16) No construction work shall take place outside the hours of 07:00 and 19:00 Mondays to Fridays, 07:00 and 13:00 on Saturdays with no working on Sundays and Public Holidays unless otherwise agreed in writing with the local planning authority.

Reason: To protect the amenity of the area

- 17) All new tracks shall be surfaced with stone from the approved borrow pit(s) or excavations for the turbine bases, unless otherwise agreed in writing by the local planning authority.

Reason: in the interests of minimising environmental impact.

- 18) The permanent running widths of internal access tracks shall be no greater than 5m (10m on bends) unless agreed in writing by the local planning authority

Reason: in the interests of minimising environmental impact.

- 19) Nothing other than uncontaminated excavated natural materials sourced within the site shall be tipped on the site.

Reason: in the interests of minimising environmental impact.

- 20) Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bunded compound shall be at least equivalent to the capacity of the tank plus 10%. If there is multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses must be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipework shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund.

Reason: in the interests of minimising environmental impact.

- 21) No tree felling within the development site shall take place until the following details have been submitted to and approved in writing by the local planning authority:

- i) Timing and methodology of the clearance operations;
- ii) Means of addressing/attenuating surface water run-off from tree clearance and related wind farm construction operations; and
- iii) Measures to monitor, mitigate and remediate any degradation of the quality and quantity of sources of private water supplies in the locality

The development shall be implemented in accordance with the approved details

Reason: In order to minimise the risk from flooding and to protect water quality and supply

- 22) No development shall take place until a preliminary site assessment has been submitted to and approved in writing by the local planning authority. The assessment shall include the following:

- i) Identification of all water features both surface and groundwater (ponds, springs, ditches, culverts etc.) within a 300 metres radius of the site boundary;
- ii) The use made of any of these water features, including the construction details (e.g. depth) of wells and boreholes and details of the lithology into which they are installed;
- iii) An indication of the flow regime in the springs or surface water features, for example whether or not the water feature flows throughout the year or dry up during summer months;
- iv) Accessibility to the springs/wells; and
- v) Where the assessments indicate impacts are likely, details of avoidance, mitigation and compensation measures

This information shall be identified on a suitably scaled map (e.g. 1:10,000), tabulated and submitted to the local planning authority. Each of the identified water features shall also be photographed as part of the assessment. The development shall be carried out in accordance with the approved assessment.

Reason: In order to protect water quality and supply

- 23) No surface water or land drainage run-off shall be allowed to connect, either directly or indirectly, to the public sewerage system unless otherwise approved in writing by the local planning authority

Reason: In order to ensure the appropriate drainage of the development.

- 24) Not less than 12 months before the expiry of the 25 year operational period of this permission, a scheme for the restoration of the site, including the dismantling and removal of all elements above ground level, and the removal of turbine bases to a depth of 1.0m, shall be submitted to the local planning authority for its written approval. The approved scheme shall be carried out and completed within 12 months from the date that the planning permission hereby granted expires.

Reason: to ensure development is removed in a sympathetic manner upon expiry of this permission

- 25) In the event of a wind turbine failing to operate for a continuous period of 6 months, unless otherwise agreed in writing by the local planning authority, a scheme for the decommissioning and removal of the wind turbine and any other ancillary equipment and structures relating solely to that turbine shall be submitted to and agreed in writing by the local planning authority within 6 months of the end of the cessation period. The scheme shall include details for the restoration of the site of the turbine and its ancillary equipment and structures. The scheme shall be implemented within 6 months of the date of its agreement by the local planning authority

Reason: in the interests of visual amenity

- 26) No development shall take place on the site access until full details of the access design and construction have been submitted to and approved in writing by the local planning authority. The access shall be constructed in accordance with the approved details

Reason: In the interests of highway safety.

- 27) No development shall take place on site until a scheme detailing the facilities for the loading, unloading, parking and turning of construction vehicles and the timing of their provision has been submitted to and approved in writing by the local planning authority. The development shall be carried out in accordance with the approved details and the facilities shall be retained for the duration of the construction period.

Reason: In the interests of highway safety.

- 28) Facilities shall be provided and retained within the site for loading, unloading, parking and turning of service vehicles in accordance with a scheme to be submitted to and approved in writing by the local planning authority. The facilities shall be carried out in accordance with the approved scheme prior to the commissioning of the wind farm and shall be retained for the duration of the development.

Reason: In the interests of highway safety.

- 29) No development shall commence on any of the access tracks or turbines until full details of the location, maximum extent and depth, profiles, means of working including rock crushing and restoration of the borrow pits have been submitted to and

approved in writing by the local planning authority. The development shall be implemented in accordance with the approved details.

Reason: In the interests of minimising environmental impact.

30) No development shall commence until a programme of archaeological mitigation has been submitted to and approved in writing by the local planning authority. The programme shall include:

- i) A watching brief;
- ii) Details of appropriate buffer zones to be established around archaeological sites; and
- iii) Specifications for temporary barriers to be erected around archaeological sites during the construction phase.

The scheme shall be implemented in accordance with the approved details.

Reason: In the interests of the historic environment.

31) Where development approaches to within 30 metres of any archaeological site, that site shall be protected and marked by a robust temporary barrier and the barrier shall remain in place for the duration of the construction phase so that no accidental damage occurs. The placement of the barriers shall not impact directly upon any unscheduled site or scheduled ancient monument areas and the barrier must be placed outside any scheduled monument boundary

Reason: In the interests of the historic environment.

32) Prior to the commencement of development, the developer shall provide written confirmation to the local planning authority that the following details have been sent to the Ministry of Defence and the Civil Aviation Authority and the commencement of development shall not occur until this confirmation has been given:

- i) Proposed date of commencement of the development; and
- ii) The maximum extension height of any construction equipment

Reason: In the interests of aviation safety

33) Within 14 days of the commissioning of the final turbine, the developer shall provide written confirmation to the local planning authority that the following details have been sent to the Ministry of Defence and the Civil Aviation Authority:

- i) Date of completion of construction;
- ii) The height above ground level of the highest potential obstacle (anemometry mast or wind turbine);
- iii) The position of that structure in latitude and longitude; and
- iv) The lighting details of the site, to include details of the lighting to be fitted to the turbines indicated in the Ministry of Defence letter dated 27 August 2015

Reason: In the interests of aviation safety.

34) Prior to the erection of any turbine a baseline television reception study of the area shall be undertaken by a qualified television engineer at the developer's expense and submitted to the local planning authority. Details of any works necessary to mitigate any adverse effects to domestic television signals in the area caused by the development shall also be submitted to and approved in writing by the local planning authority. Any claim by any person for domestic television picture loss or interference at their household within 12 months of the final commissioning of the turbines, shall be investigated by a qualified television engineer at the developer's expense and the results submitted to the local planning authority. Should any impairment to the

television reception be determined by the qualified engineer as attributable to the turbines on the basis of the baseline reception study, such impairment shall be mitigated within 6 months of its identification according to the mitigation scheme outlined, unless otherwise agreed in writing by the local planning authority.

Reason: In the interests of amenity of nearby residents.

- 35) No development shall commence until a scheme for habitat management and enhancement for all phases of the development, including its decommissioning and restoration has been submitted to and approved in writing by the local planning authority. The scheme shall include a mechanism to establish a Steering Group/Committee to review the details, and procedures for the implementation of the agreed measures, including timing. The development shall be carried out in accordance with the approved scheme.

Reason: To minimise the environmental effects on habitats.

- 36) Prior to any turbine being brought into operational use a bat surveillance strategy shall be submitted to and approved in writing by the local planning authority. The purpose of the strategy shall be to assess whether curtailment will be required in respect of informing the long term operation of the turbines. The strategy shall include the following.

- i) Aims and objectives of surveillance;
- ii) Identification of adequate baseline conditions prior to the start of development;
- iii) Appropriate criteria and triggers that inform the circumstances when curtailment will be required;
- iv) Methods of data gathering and analysis;
- v) Location of monitoring;
- vi) Timing and duration of monitoring;
- vii) Responsible persons and lines of communications; and
- viii) Review, dissemination and where appropriate, publication of results and outcomes;
- ix) Timetable for the submission of reports to the local planning authority.

Reason: To safeguard statutorily protected species.

- 37) A report shall be submitted to the local planning authority in accordance with the strategy set out in condition 36. The report shall contain the results of surveillance undertaken in accordance with the strategy and shall consider whether further surveillance is required. The Surveillance Strategy shall be implemented in accordance with the approved details. Within 12 months of the completion of the Surveillance Strategy, a Curtailment Plan shall be submitted to and approved in writing by the local planning authority. The curtailment plan shall include the following:

- i) The circumstances if and when operations will be subject to curtailment;
- ii) The times of the day when curtailment will restrict operations;
- iii) The times of the year when curtailment will restrict operations;
- iv) The weather conditions (temperature, wind speed and precipitation) when curtailment will restrict operations;
- v) Technical specifications of equipment to ensure suitability for curtailment purposes; and
- vi) Mechanisms that will be undertaken to prove and audit implementation of curtailment plans;

The Curtailment Plan shall be implemented in accordance with the approved details

Reason: To safeguard statutorily protected species

38) Prior to the erection of any wind turbine a shadow flicker statement shall be submitted to and approved in writing by the local planning authority setting out the following details:

- i) The exact turbine make and model;
- ii) A micro-siting plan showing the exact siting of the turbines; and
- iii) The results of an updated shadow flicker assessment based on i) and ii) above.

In the event that the updated shadow flicker assessment concludes that the development would cause shadow flicker effects at any nearby dwelling which lawfully exists or has planning permission for construction at the date of this decision, details of a scheme to address the incidence of shadow flicker at the affected dwellings shall be submitted to and approved in writing by the local planning authority. The scheme shall include details of photocells or other measures to control, re-orientate or shut down particular turbines. Unless agreed in writing, any turbine producing shadow flicker effects at any dwelling shall be shut down and the blades remain stationary until the conditions causing those effects have passed. The development shall be carried out in accordance with the approved scheme.

Reason: In the interests of local amenity of nearby residents.

39) The rating level of noise emissions from the combined effects of the wind turbines (including the application of any tonal penalty) when determined in accordance with the attached Guidance Notes shall not exceed the values for the relevant integer wind speed set out below.

For Cwm-y-Rhinwedd									
Wind speed m/s	4	5	6	7	8	9	10	11	12 and above
Individual standard dB	35.0	35.0	36.6	39.3	42.0	44.8	47.4	49.8	52.0
For The Sportsman's Arms									
Wind speed m/s	4	5	6	7	8	9	10	11	12 and above
Individual standard dB	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	45.0
For all other properties									
Wind speed m/	4	5	6	7	8	9	10	11	12 and above
Individual standard dB	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0

Reason: To ensure the amenity of local residents is protected

- 40) A) Prior to the first export date, the wind farm operator shall submit to the local planning authority for its written approval specifications of the type and mode of operation of the turbines to be used. The specifications shall include the tested apparent sound power level of the turbines and the uncertainty values in the measurements for all running modes of the turbines in accordance with IEC61400-11. The specifications shall also set out the running modes in which each of the turbines shall be operated for each wind speed and direction. The development shall be implemented as approved.
- B) Within 21 days from receipt of a written request from the local planning authority following a complaint to it alleging noise disturbance at a dwelling, the wind farm operator shall, at its expense, employ a consultant approved by the local planning authority to assess the level of noise emissions from the wind farm at the

complainant's property in accordance with the procedures described in the attached Guidance Notes. The written request from the local planning authority shall set out at least the date, time and location that the complaint relates to. Within 14 days of the written request of the local planning authority made under this paragraph, the wind farm operator shall provide the information relevant to the complaint logged in accordance with paragraph H) to the local planning authority in the format set out in Guidance Note 1(e).

- C) Where there is more than one property at a location specified in Table 1 attached to this condition, the noise limits set for that location shall apply to all dwellings at that location.
- D) Prior to the commencement of any measurements by the independent consultant to be undertaken in accordance with this condition, the wind farm operator shall submit to the local planning authority for written approval the proposed measurement location identified in accordance with the Guidance Notes where measurements for compliance checking purposes shall be undertaken. Measurements shall be made in "free field" conditions. To achieve this, the microphone shall be placed at least 3.5 metres away from the building facade or any reflecting surface except the ground at the approved measurement location. Measurements to assess compliance with the noise limits set out in the Tables shall be undertaken at the measurement location approved in writing by the local planning authority.
- E) Prior to the submission of the independent consultant's assessment of the rating level of noise emissions pursuant to paragraph F) of this condition, the wind farm operator shall submit to the local planning authority for written approval a proposed assessment protocol setting out the following:
 - i) the range of meteorological and operational conditions (the range of wind speeds, wind directions, power generation, running mode and times of day) to determine the assessment of the rating level of noise emissions;.
 - ii) a reasoned assessment as to whether the noise giving rise to the complaint contains or is likely to contain a tonal component

The proposed range of conditions shall be those which prevailed during times when the complainant alleges there was disturbance due to noise, having regard to the information provided in the written request of the local planning authority under paragraph B), and such others as the independent consultant considers necessary to fully assess the noise at the complainant's property. The assessment of the rating level of noise emissions shall be undertaken in accordance with the assessment protocol approved in writing by the local planning authority and the attached Guidance Notes.

- F) The wind farm operator shall provide to the local planning authority the independent consultant's assessment of the rating level of noise emissions undertaken in accordance with the Guidance Notes within 2 months of the date of the written request of the local planning authority made under paragraph B) of this condition unless the time limit is extended in writing by the local planning authority. The assessment shall include all data collected for the purposes of undertaking the compliance measurements and analysis, such data to be provided in the format set out in Guidance Note 1(e) of the Guidance Notes. The instrumentation used to undertake the measurements shall be calibrated in accordance with Guidance Note 1(a) and certificates of calibration shall be submitted to the local planning authority with the independent consultant's assessment of the rating level of noise emissions.

- G) Where a further assessment of the rating level of noise emissions from the wind farm is required pursuant to Guidance Note 4(c) of the attached Guidance Notes, the wind farm operator shall submit a copy of the further assessment within 21 days of submission of the independent consultant's assessment pursuant to paragraph F) above unless the time limit for the submission of the further assessment has been extended in writing by the local planning authority.
- H) The wind farm operator shall continuously log all the data described in Guidance Note 1(d) of the attached Guidance Notes. The data from each wind turbine and the permanent meteorological mast shall be retained for a period of not less than 24 months. The wind farm operator shall provide this information in the format set out in Guidance Note 1(e) of the attached Guidance Notes to the local planning authority on its request within 14 days of receipt in writing of such a request.

Guidance Notes for Noise Conditions

These notes are to be read with and form part of the noise conditions. They further explain the conditions and specify the methods to be employed in the assessment of complaints about noise emissions from the wind farm. The rating level at each integer wind speed is the arithmetic sum of the wind farm noise level and any tonal penalty applied in accordance with Note 3. Reference to ETSU-R-97 refers to the publication entitled "The Assessment and Rating of Noise from Wind Farms" (1997) published by the Energy Technology Support Unit (ETSU) for the Department of Trade and Industry (DTI).

Note 1

- (a) Values of the $L_{A90,10 \text{ minute}}$ noise statistic shall be measured using a sound level meter of EN 60651/BS EN 60804 Type 1, or BS EN 61672 Class 1 quality (or the equivalent UK adopted standard in force at the time of the measurements) set to measure using the fast time weighted response as specified in BS EN 60651/BS EN 60804 or BS EN 61672-1 (or the equivalent UK adopted standard in force at the time of the measurements). This shall be calibrated before and after each set of measurements, using a calibrator meeting BS EN 60945:2003 "Electroacoustics – sound calibrators" Class 1 with PTB Type Approval (or the equivalent UK adopted standard in force at the time of the measurements) and the results shall be recorded. Measurements shall be undertaken in such a manner to enable a tonal penalty to be calculated and applied in accordance with Guidance Note 3.
- (b) The microphone shall be mounted at 1.2 – 1.5 metres above ground level, fitted with a two-layer windshield or suitable equivalent approved in writing by the local planning authority.
- (c) The $L_{A90,10 \text{ minute}}$ measurements shall be synchronised with measurements of the 10-minute arithmetic mean wind speed and wind direction data and with operational data logged in accordance with Guidance Note 1(d), and rain data logged in accordance with Note 1(f).
- (d) To enable compliance with the conditions to be evaluated, the wind farm operator shall continuously log arithmetic mean wind speed in metres per second (m/s) and arithmetic wind direction in degrees from north at hub height for each turbine and arithmetic mean wind direction in metres from north in each successive 10-minute period at the permanent meteorological mast erected in accordance with the planning permission on the site. Each 10 minute arithmetic mean wind speed as measured on the mast at turbine hub height shall be 'standardised' to a reference height of 10 metres as described in ETSU-R-97 at page 120 using a reference roughness length of 0.05 metres. It is this standardised 10 metre height wind

speed data which is correlated with the noise measurements determined as valid in accordance with Note 2(b), such correlation to be undertaken in the manner described in Note 2(c). The wind farm operator shall continuously log arithmetic mean wind speed, arithmetic mean nacelle orientation, arithmetic mean wind direction as measured at the nacelle and arithmetic mean power generated and turbine running mode during each successive 10-minute period for each wind turbine on the wind farm. All 10-minute periods shall commence on the hour and in 10-minute increments thereafter synchronised with Greenwich Mean Time and adjusted to British Summer Time where necessary

- (e) Data provided to the local planning authority in accordance with paragraphs F), G), and H) of the noise condition shall be provided in comma separated values in electronic format.
- (f) A data logging rain gauge shall be installed in the whole of the assessment of the levels of noise emissions. The gauge shall record the amount of rainfall in each 10-minute period synchronised with the periods of data recorded in accordance with Note 1(d). The wind farm operator shall submit details of the proposed location of the data logging rain gauge to the local planning authority prior to the commencement of the measurements.

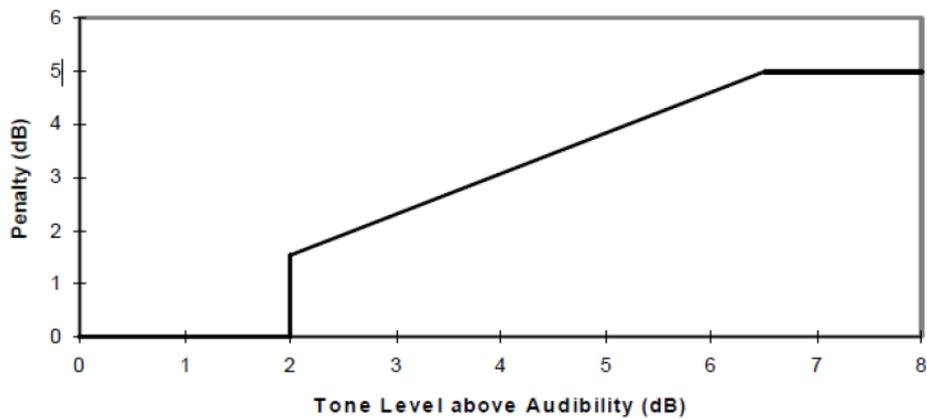
Note 2

- (a) The noise measurements shall be made so as to provide not less than 20 valid data points as defined in Guidance Note 2 (b).
- (b) Valid data points are those measured during the conditions set out in the assessment protocol approved by the local planning authority under paragraph E) of the noise condition but excluding any periods of rainfall measured in accordance with Note 1(f) and any other periods which, in the opinion of the independent consultant, are not normal conditions.
- (c) Values of the $L_{A90,10 \text{ minute}}$ noise measurements and corresponding values of the 10-minute standardised ten metre height wind speed for those data points considered valid in accordance with Note 2(b) shall be plotted on an XY chart with noise level on the Y-axis and wind speed on the X-axis. A least squares "best fit" curve of an order deemed appropriate by the independent consultant (but which may not be higher than a fourth order) shall be fitted to the data points and define the wind farm noise level at each integer speed.

Note 3

- (a) Where, in accordance with the approved assessment protocol under paragraph E) of the noise condition, noise emissions at the location or locations where compliance measurements are being undertaken contain or are likely to contain a tonal component, a tonal penalty shall be calculated and applied using the following rating procedure.
- (b) For each 10 minute interval for which $L_{A90,10 \text{ minute}}$ data have been determined as valid in accordance with Note 2, a tonal assessment shall be performed on noise emissions during 2 minutes of each 10-minute period. The 2-minute periods shall be spaced at 10 minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure"). Where uncorrupted data are not available, the first available uninterrupted clean 2-minute period out of the affected overall 10-minute period shall be selected. Any such deviations from the standard procedure shall be reported.
- (c) For each of the 2-minute samples the tone level above audibility shall be calculated by comparison with the audibility criterion given in Section 2.1 on pages 104-109 of ETSU-R-97.

- (d) The tone level above audibility shall be plotted against wind speed for each of the 2-minute samples. In samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted.
- (e) A least squares "best fit" linear regression line shall then be performed to establish the average tone level above audibility for each integer wind speed derived from the value of the "best fit" line fitted to values within $\pm 0.5\text{m/s}$ of each integer wind speed. If there is no apparent trend with wind speed then a simple arithmetic mean shall be used. This process shall be repeated for each integer wind speed for which there is an assessment of overall levels in Note 2.
- (f) The tonal penalty is derived from the margin above audibility of the tone according to the figure below derived from the average tone level above audibility for each integer wind speed.



Note 4

- (a) If a tonal penalty is to be applied in accordance with Note 3 the assessment level of the turbine noise at each wind speed is the arithmetic sum of the measured noise level as determined from the best fit curve described in Note 2 and the penalty for tonal noise as derived in accordance with Note 3 at each integer wind speed within the range set out in the approved assessment protocol under paragraph E) of the noise condition.
- (b) If no tonal penalty is to be applied then the assessment level of the turbine noise at each wind speed is equal to the measured noise level as determined from the best fit curve described in Note 2.
- (c) If the assessment level at every integer wind speed lies at or below the values set out in the Tables attached to the noise conditions then no further action is necessary since the rating level is also clearly below the limits. In the event that the assessment level is above the limit(s) set out in the Tables attached to the noise conditions at any integer wind speed, the independent consultant shall undertake a further assessment to correct for background noise so that the rating level relates to wind turbine noise emission only.
- (d) The wind farm operator shall ensure that all the wind turbines in the development are turned off for such period as the independent consultant requires to undertake the further assessment. The further assessment shall be undertaken in accordance with the following steps:
 - i) Repeating the steps in Note 2, with the wind farm switched off, and determining the background noise (L3) at each integer wind speed within the range set out in the approved noise assessment protocol under paragraph E) of the noise condition;

- ii) The wind farm noise (L1) at this speed shall then be calculated as follows where L2 is the measured level with turbines running but without the addition of any tonal penalty;

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

- iii) The rating level shall be calculated by adding the tonal quality (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at each integer wind speed; and
- iv) If the rating level after adjustment for background noise contribution and adjustment for tonal penalty (if required in accordance with note iii) above) at every integer wind speed lies at or below the values set out in the Tables attached to the noise conditions at all wind speeds then no further action is necessary. If the rating level at any integer wind speed exceeds the values set out in the Tables attached to the noise conditions then the development fails to comply with the conditions.