

Planning, Taxi Licensing and Rights of Way Committee Report

Application No:	P/2017/0764	Grid Ref:	294795.69 274076.13
Community Council:	St. Harmon	Valid Date:	Officer: 17/07/2017 Holly Hobbs
Applicant:	Zephyr Investments Ltd, 11th Floor, 200 Aldergate Street, London, EC1A 4HD.		
Location:	Bryn Titli Wind Farm, North of Rhayader, South of Llangurig, Powys.		
Proposal:	Section 73 application for variation of condition no. 6 and condition no's. 11-18 of planning permission R4297/D		
Application Type:	Application for Removal or Variation of a Condition		

The reason for Committee determination

The application is accompanied by an Environmental Statement.

Site Location and Description

Bryn Titli Windfarm is located above the A470 between Rhayader and Llangurig on a plateau where the predominant vegetation is upland grassland used for grazing. The wind farm is served by an access from the A470 and a network of on-site access tracks, hard standing areas, underground cabling and a wind monitoring mast. The site is currently occupied by 22 wind turbines each with a rated capacity of 450 kW and a total site installed capacity of 9.9 mw. The installed turbines measure 53.5 metres to the blade tip, 35 metres to the hub and have a rotor diameter of 37 metres.

There are eleven Sites of Special Scientific Interest and Special Areas of Conservation within 5km of the site and the Elenydd Maellen Special Protection Area lies immediately adjacent to the eastern boundary and covers part of the central part of the site. Most of the site is designated open access land and a number of Public Rights of Way cross or run close to the site.

The wind farm was originally granted permission by Radnorshire District Council on 9th August 1993 under planning reference R4297/D. Condition 6 of the planning permission states;

'The wind turbines hereby permitted shall be decommissioned and removed from the site within 25 years of the first notified commissioning of the site and the site reinstated to ground level and allowed to seed over.'

It is understood that the wind farm commenced operations on 30th June 1994 and the 25 year period is therefore due to expire on 29th June 2019.

The current application seeks to amend condition 6 with the effect that decommissioning would be extended to 34 years, effectively allowing the scheme to continue to export electricity until 29th June 2027 with an additional year allowed for the decommissioning and restoration of the site.

The submission also includes a proposal to update the original conditions (11-18) relating to noise and suggests that the Local Planning Authority might wish to consider a varied/new condition relating to the decommissioning of the site as referred to in condition 6 above.

Consultee Response

St Harmon Community Council

The planning application reference P/2017/0764 – Bryn Titli Farm, was discussed at our last meeting and St Harmon Community Council agreed in principle to support this application would like to ensure that the restoration of the site is accounted for when decommissioning eventually takes place so that the site complements the surrounding area.

Rhayader Town Council

There were no objections to this application and Councillors recommended approval.

Nantmel Community Council

No response.

Abbeycwmhir Community Council

No response.

Llangurig Community Council

Please note that following discussion at its meeting this week Llangurig Community Council found no objection to the above planning application and have no comments to make.

Llandinam Community Council

No response.

Highway Authority

Correspondence dated 20th September 2017 –

I refer to the amended plans relating to the above site and have no further comments to make.

Welsh Government Transport

I refer to your consultation of 26/07/2017 regarding the above planning application and advise that the Welsh Government as highway authority for the trunk road network directs that any permission granted by your authority shall include the following conditions:

1) The applicant must ensure that the traffic management decommissioning plan is updated and submitted for approval in writing to the local planning authority in consultation with the Welsh Government prior to any decommissioning taking place.

The above conditions are included to maintain the safety and free flow of trunk road traffic.

Environmental Health

Correspondence received 12th December 2018 –

Please find attached comments from Dick Bowdler (Council's Acoustic Consultant), which we support.

We do not agree with the comments submitted by the developer, justification attached and continue to propose conditions.

(Members please be advised that a copy of Mr D Bowdlers comments are attached in full).

Rights of Way

There are public rights of way within and in close vicinity to the Bryn Titli Wind Farm site. Therefore, public rights of way would continue to be affected by any extension. Countryside Services advise that turbines are kept tip-height from footpaths and 200 metres from paths of higher status. The applicant took up Countryside Services offer of a meeting, with a site visit being undertaken on 28th February 2017.

We note the content of the ES Chapter 10 and the offer of an alternative waymarked route to allow users of the bridleway 255 to maintain a greater distance from turbines 18 and 21. We would like clarification on where the alternative route would be located and the separation distances that would be achieved.

We welcome the commitment to replacing the gate at the site entrance and request that the applicant approves the choice of gate with Countryside Services in advance. We note the proposal to install a stile on footpath 322 near turbine 15. We request that consideration is given to installing a pedestrian gate at this location instead, to allow access to all.

In our meeting with the developers, dated 25th October 2016, mention was made with regards to the provision of a contribution to off-site improvements to public rights of way. I can see no mention of this within the ES and query its omission.

Countryside Services request that the mitigation outlined above is set out within an appropriate condition. Countryside Services would welcome the opportunity to be consulted on the decommissioning phase of the project and the potential closure of public rights of way in due course.

Powys Ecologist

No comments received at the time of writing this report. Members are advised that Officers will seek to secure an ecology response prior to the Committee meeting which will be reported within the update or within the verbal presentation.

Natural Resources Wales

NRW does not object to variation of condition 6 of planning permission R4297/D. In our opinion, as explained below, the proposal is not likely to adversely affect any of the interests listed. NRW does not have any comment to make on conditions 11-18.

Protected Species

Bats and their breeding and resting places are protected under the Wildlife and Countryside act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 (as amended), and they are a material consideration for planning.

NRW has reviewed the ecological report (Bilston, H (2017). Bryn Titli Wind Farm Life Extension. BSG Ecology. Unpublished). NRW is satisfied it has been carried out to an acceptable standard. The ecology report considers the potential impact of the proposal on local bat populations.

The assessment considers injury/killing of bats. The assessment was based on a carcass search by using dogs. The outcome of the carcass search was one dead common pipistrelle was found.

We concur with the conclusion that the extending of the operational life span of this existing wind farm is not likely to be detrimental to any local populations of bat.

Ornithology

An assessment of the potential impact of the proposal on ornithological interests has been undertaken in Chapter 6 of the Environmental Statement prepared by BSG Ecology. As part of this, a Collision Risk Analysis (Appendix 6.3) has been submitted.

The 'Bryn Titli Life Extension Planning Statement' (Innogy, June 2017) states that the proposal to extend the life of the wind farm 'would not result in any significant impact on ornithology'. From the information provided, we agree with this conclusion.

Please do not hesitate to contact us if you require further information or clarification on any of the above.

Our comments above only relate specifically to matters that are included on our checklist "Natural Resources Wales and Planning Consultations" (March 2015) which is published on our website: (<https://naturalresources.wales/planning-and-development/planning-and-development/?lang=en>). We have not considered potential effects on other matters and do not rule out the potential for the proposed development to affect other interests, including environmental interests of local importance. The applicant should be advised that, in addition to planning permission, it is their responsibility to ensure that they secure all other

permits/consents relevant to their development

Cadw

Advice

Having carefully considered the information provided with this planning application, we have no objections. Our assessment is given below.

Our role

Our statutory role in the planning process is to provide the local planning authority with an assessment concerned with the likely impact that the proposal will have on scheduled monuments, registered historic parks and gardens, registered historic landscapes where an Environmental Impact Assessment is required and development likely to have an impact on the outstanding universal value of a World Heritage Site. We do not provide an assessment of the likely impact of the development on listed buildings or conservation areas, as these are matters for the local authority.

It is for the local planning authority to weigh our assessment against all the other material considerations in determining whether to approve planning permission.

National Policy

Applications for planning permission are considered in light of the Welsh Government's land use planning policy and guidance contained in Planning Policy Wales (PPW), Technical Advice Notes and circular guidance.

PPW (Chapter 6 – The Historic Environment) explains that the conservation of archaeological remains is a material consideration in determining a planning application, whether those remains are a scheduled monument or not. Where nationally important archaeological remains, whether scheduled or not, and their settings are likely to be affected by proposed development, there should be a presumption in favour of their physical protection in situ. 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. Technical Advice Note 24 : The Historic Environment elaborates by explaining that there is a presumption against proposals which would involve significant alteration or cause damage, or which would have a significant impact on the setting of remains.

PPW also explains that local authorities should protect parks and gardens and their settings included in the first part of the Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales, and that the effect of a proposed development on a registered park or garden or its setting should be a material consideration in the determination of a planning application.

Assessment

Scheduled Monuments within vicinity:

MG084 Rhyd yr Onen Mound & Bailey Castle MG267 Domen Glw Cairn
RD043 Maen Serth, Esgai Dderw
RD070 Standing Stone & Round Barrow SE of Henriw RD119Cwm y Saeson Standing
Stone
RD176 Drysgol Platform
RD206 Carn Wen cairn RD207 Carn Nant-y-ffald cairn RD208 Carn y Groes cairn

Condition 6 requires the turbines to be decommissioned within 25 years of the commissioning of the site and the site reinstated. The proposed variation will extend this decommissioning of the turbines for a further 9 years until 2028.

Conditions 11 -18 relate to noise from the turbines and were set before current guidance was set and therefore it is proposed to replace these conditions with new ones that accord with current guidance.

The application is accompanied by an environmental impact assessment which includes a cultural heritage chapter prepared by Headland Archaeology. This concludes that the extension of the operational use of the wind farm proposed in the variation of condition 6 will not have more than a negligible or very slight impact on the setting of the scheduled monuments listed above. We concur with this assessment. All of the above listed scheduled monuments are located at a distance where the noise of the operating turbines does not have any affect on the setting of the scheduled monuments.

Clwyd Powys Archaeological Trust

Thank you for the consultation on these variations of condition. I can confirm that none of the variations would have archaeological implications.

Built Heritage Conservation Officer

Thank you for consulting me on the above application.

I note that the conditions to be varied are in respect of;

Condition 6 – time limit and decommissioning

Conditions 11-18 noise.

As the proposal relates to retaining a structure on site for a longer period of time than the permission granted and in respect of noise which will be considered by other more appropriate consultees, I can confirm that I would have no objection to the proposal on built heritage grounds.

Ministry Of Defence

Thank you for consulting the Ministry of Defence (MOD) on the above variation of conditions in your communication dated 26/07/2017. The MOD was not consulted on the original planning application R4297/D and therefore a full technical and operational assessment has been completed for the 22 turbines.

I am writing to tell you that the MOD has no objection to the wind farm or the variation of conditions as outlined in your above application. Whilst the MOD has no objections to the Windfarm, in the interests of air safety the MOD will request that the development should be fitted with MOD accredited aviation safety lighting. All perimeter turbines should be fitted with 25 candela omni-directional red lighting or infrared lighting with an optimised flash pattern of 60 flashes per minute of 200ms to 500ms duration at the highest practicable point. All cardinal turbines should be fitted with 25 candela omni-directional red lighting and infrared lighting with an optimised flash pattern of 60 flashes per minute of 200ms to 500ms duration at the highest practicable point.

The application is for 22 turbines at 53.5 metres to blade tip. This has been assessed using the grid references below as submitted in the planning application or in the developers' or your pro-forma.

The principal safeguarding concern of the MOD with respect to the development of wind turbines relates to their potential to create a physical obstruction to air traffic movements and cause interference to Air Traffic Control and Air Defence radar installations.

Defence Infrastructure Organisation Safeguarding wishes to be consulted and notified of the progression of planning applications and submissions relating to this proposal to verify that it will not adversely affect defence interests.

If the application is altered in any way we must be consulted again as even the slightest change could unacceptably affect us.

Representations

At the time of writing this report, 7 representations have been received by Development Management and comprise of the following;

Six letters of support have been received:

The first states that:

'I firmly believe that the UK should be investing in our green infrastructure, in order to secure a more sustainable future. A life extension for the Bryn Titli wind farm provides an excellent opportunity to produce clean energy without the added disruption of construction and will maximise the benefits of our existing green infrastructure.'

The second, from a local business states that:

'It (the wind farm) has supported ours and other local businesses for many years and has supported local communities.'

The third from the Director of Concord Hydraulics Limited states that:

'I am writing to support the proposed planning application to keep the Bryn Titli wind farm project in operation.'

We are a small company in Newtown employing five people. We at present supply the wind farm industry with hydraulic hoses, fittings, accumulators, hydraulic cylinders, pneumatics and many more items.

I would like to say that we support the Bryn Titli wind farm because it would provide desperately needed employment in the area’.

The fourth from the Director of Mid Wales Welded Productions reads as follows:

‘I am writing to support the proposed planning application to keep the Bryn Titli Wind Farm Project in operation.

We are a small company in Llanidloes employing 10 staff. We at present supply the Wind Farm industry with fabricated washers and plates, help with repairs to a variety of parts, supply rescue boxes - wall mounting frame that are on each turbine and other standard parts as and when required.

I would like to say we support the proposal at Bryn Title Wind Farm because it brings employment and trade to the area.

I wish my comments to be taken into consideration by Powys County Council’.

The fifth from a firm in Caesws reads:

‘We would like to show our support for application P/2017/0764, for the continued operation of Bryn Titli windfarm, until 2027.

Windtechs are a Welsh company employing 10 local people operating & maintaining wind turbines in Wales.

Our work on Bryn Titli accounts for a significant part of our income.

We have been employed by the owners for over 7 years to carry out scheduled & unscheduled maintenance.

Please consider the benefits to local companies, community & environment.’

The sixth from a Builders Merchant in Llanidloes reads:

‘I am writing to you in relation to the above planning reference, to support the proposed planning application to keep the Bryn Titli Wind Farm Project, situated approximately 9km south of Llanidloes.

We are a builder’s merchant in Llanidloes employing 8 people locally. We at present supply various building materials to local windfarm projects like this one, and again confirm we support the proposal to keep this windfarm in operation at Bryn Titli as it would bring much needed employment into this area.

I wish for my comments to be taken into consideration for the above-mentioned planning application.’

The sixth is from Deutsche Windtechnik:

'Deutsche Windtechnik specialises in maintenance of wind turbines and relies on this wind farm as part of its operations. Deutsche Windechnic holds 72 employees, employing specifically 17 individuals in the Wales area who depend on this employment'.

One letter of objection has been received which reads as follows:

'I am writing as a local resident to formally object to the planning application to extend the life of the Bryn Titli wind farm, Rhayader.

There are no reasonable grounds to justify the continued lifespan of this site. Planning approval for this site was granted by Radnorshire District Council for a period of 25 years. It was clearly not the intention of our democratically elected representatives - or the understanding of the community itself - that this would be a permanent site, but this is clearly the intention of the applicant. This is clearly an attempt by the applicant to circumvent the shift in the UK Government's energy policy away from onshore schemes, towards offshore. It is also contrary to local will, as demonstrated through the shift in Powys County Council's LDP towards broader forms of renewable energy, such as solar PV.

The construction of the site has already done untold damage to the environment, habitats and biodiversity (with the area home to a number of Sites of Special Scientific Interest, Special Areas of Conservation and Special Protection Area). The applicant recognises the potential for collisions for Red Kites, a locally and nationally significant species, but fails to mention the potential impact the scheme has on the Curlew - another significant species widely recognised to be endangered and which is a common sight and sound in the area in the breeding season.

The true cost of this environmental impact will not be fully realised - if at all - until the scheme has been decommissioned and the site returned to nature. We do not yet know how many years or generations it will take to undo this damage. We cannot afford to wait a further nine years to begin this vital process - and if this extension is approved, the community can have no confidence that this will ever happen. We will simply likely enter into a continuous cycle of extensions to the life of the scheme. It is ironic that the applicant suggests that environmental impacts are likely to be more significant as a result of decommissioning! Again, this would suggest a hidden agenda to create a permanency to the scheme.

This scheme was one of the very first wind farms brought into commission in Wales. It is as such outdated, less efficient and less economical than offshore schemes being commissioned today. Any reduction from electricity generation capacity by not extending the life of this scheme will therefore easily be met - and indeed likely exceeded - by new offshore schemes coming on stream around the UK (as well as from proposed alternative forms of renewable energy in Powys, such as solar PV). The need to increase electricity generated by renewables is not an excuse to hide behind - and cannot be the job of Powys alone!

There can be no economic benefit (beyond a minimal) to the local community through extension of the site. Any economic benefits would have likely been realised during initial construction or early years in the life of the scheme. Indeed, not extending the life of the scheme and the required decommissioning of the site is the only way to generate any further local economic benefit, creating new economic activity and skilled employment opportunities for the local community. This would present an opportunity for the local area to become a centre of excellence in decommissioning wind farms and recreating high quality natural

environments, which support clean economic growth. This would also support Mid-Wales' growing tourist economy and could be a major feature of any future Mid-Wales Growth Deal.

Much has been made of the community benefits paid by the scheme to the local community. While no doubt valuable to individual community groups, the total sum of around £8,000 per year is pitiful considering the impact the scheme has on the local community and the local environment. The cost of the planning application alone or the PR consultants paid to promote the scheme probably exceeds this token gesture many times over. £8,000 in community benefits is minuscule compared to the profits that the scheme generates for the applicant. A true community benefit would be for the electricity generated by the scheme to become a community asset, providing low cost electricity for local residents, businesses and farmers.

The biggest impact of the scheme - and the most common issue raised by people in the community (and not necessarily those in direct proximity or line of site to the scheme) is noise impact, including low frequency and amplitude modulation. This results in severe distress, sleep disturbance and headaches and impacts on individuals' own health (including mental health) and wellbeing, enjoyment of their homes and day-to-day lives. The fact that the scheme is approaching its end life has been the only comfort to them and this masks the true number of those affected as people have been reluctant to make a noise complaint as the end of the scheme was in sight.

Approval of the application will subject residents to a further nine years of unjustifiable noise impact. Should the application be approved it is essential that the strictest conditions are placed on night time operation - restricting hours of operation - and specific conditions are placed on it relating to independent inspection of noise impacts, including amplitude modulation. Otherwise the local community will feel voiceless, powerless and unprotected, unable to affect and control changes in their community and in the places where they live'.

Planning History

R4297 – Full: Temp Consent for 24 months: erection of masts to measure wind speed. Approved March 1991.

R4297A – Full: Erection of 16, 25 metres high wind turbines and associated works. Approved October 1991.

R4297B - Full: Erection of 33, 25 metres high wind turbines and associated works. Approved October 1992.

R4297C – Full: Erection of a control building and substation. Approved June 1993.

R4297D – Full: Erection of 22 wind turbines and associated works. Approved August 1993.

R4297E – Full: Borrow Pit 1, Rock/stone excavation for temp site access. Approved October 1993.

R4297F – Full: Borrow Pit 2, Rock/stone excavation for temp site access. Approved October 1993.

R4297G – Full: Erection of 30 metre high mast. Approved May 1994.

R4297H – Full: Temporary erection of a 25 metre mast for collection of operational wind data. Approved September 1995.

PR539700 – Full: Overhead lines. Deemed Consent. June 1998.

Principal Planning Constraints

Rights of Way
SSSI
Special Area of Conservation
Elenydd Mallaen – Special Protection Area
Scheduled Ancient Monuments

Principal Planning Policies

National Planning Policy

Planning Policy Wales 9th Edition November 2016)

Technical Advice Note 5 - Nature Conservation and Planning (2009)
Technical Advice Note 6 - Planning for Sustainable Rural Communities (2010)
Technical Advice Note 8 - Renewable Energy (2005)
Technical Advice Note 11- Noise (1997)
Technical Advice Note 15 - Development and Flood Risk (2004)
Technical Advice Note -16 Sport, Recreation and Open Space (2009)
Technical Advice Note 23- Economic Development (2014)
Technical Advice Note 24 – Historic Environment (2017)

National Planning Statement for Energy 2011 (EN-1)
National Planning Statement for Renewable Energy Infrastructure 2011 (EN-3)

Local Planning Policy

Powys Local Development Plan (2018)

SP7 – Safeguarding of Strategic Resources and Assets
DM1 – Planning Obligations
DM2 – The Natural Environment
DM4 – Landscape
DM5 – Development and Flood Risk
DM6 – Flood Prevention Measures and Land Drainage
DM7 – Dark Skies and External Lighting
DM13 – Design and Resources
E2 – Employment Proposals on Non-allocated Employment Sites
T1 – Travel, Traffic and Transport Infrastructure
RE1 – Renewable Energy

RDG=Powys Residential Design Guide NAW=National Assembly for Wales TAN= Technical Advice Note
LDP=Powys Local Development Plan, MIPPS=Ministerial Interim Planning Policy Statement

Other Legislative Considerations

Crime and Disorder Act 1998

Equality Act 2010

Planning (Wales) Act 2015 (Welsh language)

Wellbeing of Future Generations (Wales) Act 2015

Officer Appraisal

Introduction

Section 38 (6) of the Planning and Compulsory Purchase Act 2004

Members are advised to consider this application in accordance with Section 38 (6) of the Planning and Compulsory Purchase Act 2004, which requires that, if regard is to be had to the development plan for the purpose of any determination to be made under the Planning Acts, the determination must be made in accordance with the plan unless material considerations indicate otherwise.

Principle of the Development

Paragraph 2.14 of Technical Advice Note 8 (TAN8) - Planning for Renewable Energy acknowledges that 'there will be opportunities to re-power and or extend existing wind farms which may be located outside of Strategic Search Areas (SSA's) and these should be encouraged provided that the environmental and landscape impacts are acceptable'.

Bryn Titli Wind Farm has been operational since June 1994 and is located outside of a SSA. The current application seeks to amend condition 6 with the effect that decommissioning would be extended to 34 years, effectively allowing the scheme to continue to export electricity until 29th June 2027 with an additional year allowed for the decommissioning and restoration of the site.

In light of the guidance contained within TAN8 and policy presumption in favour of appropriate renewable energy developments, it is concluded that the principle of development is acceptable subject to all other material considerations being satisfied.

Landscape and Visual Impact

LDP policy DM4 (Landscape) confirms that proposals for new development must not, individually or cumulatively, have an unacceptable adverse effect, on the valued characteristics and qualities of the Powys landscape. All proposals will need to:

1. Be appropriate and sensitive in terms of integration, siting, scale and design to the characteristics and qualities of the landscape including its: topography; development pattern and features; historical and ecological qualities; open views; and tranquillity; and
2. Have regard to LANDMAP, Registered Historic Landscapes, adjacent protected landscapes (National Parks and Areas of Outstanding Natural Beauty) and the visual amenity enjoyed by users of both Powys landscapes and adjoining areas.

Proposals which are likely to have a significant impact on the landscape and/or visual amenity will require a Landscape and Visual Impact Assessment to be undertaken.

For the purpose of LANDMAP, the application site is located within the 'Mountain Plateau with windfarm' Aspect Area which is defined as a single area, to the east of the Wye Valley in the north of the County. The aspect area is mainly open comprising of large regular fields. The overall classification is moderate.

The application is accompanied by a Landscape and Visual Impact Assessment (LVIA) which considers the effects on the landscape as a resource in its own right, and views and visual amenity as experienced by people. A Zone of Theoretical Visibility (ZTV) is included. It has been undertaken in accordance with the current Guidelines for Landscape and Visual Impact Assessment (3rd Edition, 2013) and assumes a baseline where the existing windfarm has been decommissioned (i.e. no turbines are present).

For consistency with the 1993 LVIA, the study area was defined as a 15km radius from the outermost turbines of the development. The study area encompasses part of the Upper Wye Valley, separating the Cambrian Mountains in the west and the Radnorshire Hills in the east. Existing/under construction/consented/pending wind farms up to approximately 20km from the development site were considered as part of the baseline; these include although not limited to, Bryn Blaen (under construction) approximately 7.55km to the north west, Hirddywel (pending) approximately 10.54 to the north east and Llandinam (operational) approximately 12.42 to the north east.

Visual effects were considered from viewpoints and routes across the defined study area and include public rights of way and the public highway. The LVIA identified significant effects in six Visual and Sensory Aspect Areas and, of the 12 viewpoints chosen, six were identified as showing significant effects. None of the main settlements would experience significant visual effects whilst moderate and significant impacts are experienced on Cwmystwyth Road (Viewpoint 6) and the Wye Valley Walk (viewpoints 2 & 7). Minor and not significant effects were noted along Glyndwrs Way (Viewpoints 11 & 12).

In addressing Landscape and Visual Impacts the applicants Planning Statement offers the following:

'Although the LVIA identifies some significant adverse impacts, these have previously been found to be acceptable by virtue of the original grant of planning permission. Furthermore, the significant adverse impacts do not constitute matters that would outweigh the wide-ranging benefits of the proposal identified. Having been operational for this use since 1994, the site is a proven location for a wind farm and the proposed life extension is appropriate in planning terms.'

'On balance, and in the context of the evidence presented in the ES, it is concluded that the Bryn Titli Wind Farm life extension proposal does not conflict with the relevant policies and guidance set out in PPW, the UDP and the Draft LDP.'

The applicant's Landscape and Visual Appraisal was sent to the Council's Landscape Consultants for scrutiny who later responded with some criticisms relating to methodology and conclusions. These were forwarded to the applicants who thereafter responded with comments and additional information. Having reviewed the additional information submitted, the Council's Landscape Consultant acknowledges the amendments made and confirms that whilst there remains a difference in professional opinion, the Local Planning Authority has before them an LVIA on which to consider the proposed development.

Having carefully reviewed the LVIA, Officers consider that the proposed wind turbine development will not have an unacceptable adverse impact on the character of the landscape or visual amenity. On this basis, it is considered that the proposed development is compliant with policies DM4, DM13 and RE1 of the Powys Local Development Plan, Technical Advice Note 8 and Planning Policy Wales.

Ecology and Biodiversity

Policy DM2 of the LDP confirms that development proposals shall demonstrate how they protect, positively manage and enhance biodiversity and geodiversity interests including improving the resilience of biodiversity through the enhanced connectivity of habitats within, and beyond the site.

Development proposals which would impact on the following natural environment assets will only be permitted where they do not unacceptably adversely affect important site designations, habitats and species afforded the highest levels of protection through European legislation.

There are eleven Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC) located within approximately 5km of the application site. Elenydd Maellen Special Protection Area (SPA) lies adjacent to the eastern boundary of the site and covers part of the central part of the site.

The Environmental Statement accompanying the application includes Ecological Chapters addressing actual and potential impacts on Bats and Bird Species. Given that the wind farm is already in existence the impacts on existing habitat have not been assessed.

Having reviewed the Ecological Report entitled 'Bryn Titli Wind Farm Life Extension' prepared by BSG Ecology, dated June 2017. Natural Resources Wales has confirmed that they are satisfied with the survey methodology and findings and therefore offer no objection to the proposal.

Claims have been made within the third party representation received that the consented wind turbine development has resulted in untold damage to the environment and biodiversity which would continue if the operational period were extended. Members are advised that NRW have been contacted in this regard and have responded to the effect that there is no evidence to substantiate the objectors assertions.

In light of the comments received from NRW and notwithstanding the third party concerns expressed, it is not considered that the proposed development will unacceptably adversely affect protected species, their habitats or other designated areas of importance.

Development Management is still awaiting a response from the Council Ecologist. It is hoped that an update report will be provided that includes this response and the consideration of this response.

Noise impacts

In accordance with policy DM13 of the LDP, development proposals will only be permitted where the amenities enjoyed by the occupants or users of nearby or proposed properties would not be unacceptably affected by levels of noise.

The current submission seeks to revise conditions 11-18 attached to planning permission R4297, which relate to noise emissions. As detailed within the Environmental Health consultation response above, there is a level of disagreement between the applicants and the Council's Acoustic Experts, particularly in regard to the updating of the noise conditions. Whilst there is agreement on the conclusion that predicted and measured turbine noise levels are compliant with extant Government Guidance (ETSU-R-97) there are three matters where there has been a variance of approach, one procedural and the other two technical.

Whilst acknowledging the comments submitted by the applicant's acoustic consultant, no evidence has been submitted to justify an alternative approach to the standard conditions imposed by Development Management on recently consented wind turbine developments. As such, in accordance with the advice given by the Council's acoustic consultant and Environmental Health comments, should Members be minded to grant consent, it is recommended that the noise conditions detailed below are attached to any permission issued. Should the applicants wish to challenge the conditions, Officers would advise that an appeal would be the appropriate course to follow.

Subject to the imposition of the recommended conditions, it is considered that the proposed development is compliant with policies DM13 and RE1 of the Powys LDP, Technical Advice Note 11 and PPW.

Cultural Heritage

Paragraph 4.2 of Technical Advice Note 24 – Historic Environment confirms that the conservation of archaeological remains is a material consideration in determining a planning application. When considering development proposals that affect scheduled monuments or other nationally important archaeological remains, 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. In cases involving less significant archaeological 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 proposed development.

The application is accompanied by an Environmental Impact Assessment which includes a cultural heritage chapter prepared by Headland Archaeology which. The cultural heritage assessment concludes that the extension of the operational use of the wind farm as proposed will not have more than a negligible or very slight impact on the setting of the scheduled monuments listed above.

In responding to the consultation exercise, Cadw confirms that there are a number of Scheduled Ancient Monuments (SAMs) located within proximity of Bryn Titli windfarm, namely;

MG084- Rhyd yr Onen Mound & Bailey Castle
MG267 - Domen Glw Cairn

RD043 - Maen Serth, Esgai Dderw
RD070 - Standing Stone & Round Barrow SE of Henriw
RD119 - Cwm y Saeson Standing Stone
RD176 - Drysgol Platform
RD206 - Carn Wen cairn
RD207 - Carn Nant-y-ffald cairn
RD208 - Carn y Groes cairn

The response received thereafter confirms that Cadw agree with the assessment conclusions given the intervening distances between the site and identified SAMs.

In addition to the above, Members are advised that independent advice has been sought by Development Management from a Cultural Heritage Consultant. The consultant for the Authority has reported as follows:

'The scope of the cultural heritage assessment presented in the Environmental Statement reflected the requirements set out in our previous advice to the Council (dated 5th July 2016) and no substantial omissions were noted.

In terms of the assessment we have two comments:

1. The assessment of impact on the setting of scheduled monuments and listed buildings tends to emphasise the potential impact of the turbines on views out from monuments / buildings and does not explicitly, in all cases, address potential impacts on views from third points which feature the monuments / buildings and the turbines. Having reviewed the supplied evidence I am of the opinion that this issue would not however substantial change the findings of the assessment or my advice; and

2. As with many impact assessments, the findings, in my view, tend to underestimate the potential impacts and resultant effects. In this case I have reviewed the information presented and while I am of the view that some of the negligible impacts are underreported, the resultant impacts in my view are not significant. In this context the "exceptional circumstances" test set out in paragraph 6.5.5 of PPW is not triggered.

In summary, having reviewed the cultural heritage assessment undertaken as part of the Environmental Impact Assessment process I can confirm it has been undertaken in broad accordance with the Scoping Opinion, albeit with some comments, and that its conclusions are generally valid although tending to be slightly underreported, see comment above. Further to this, I have not identified any impacts significant enough in their own right to justify refusal in terms of national or local planning policy relevant to the historic environment'.

Whilst acknowledging an element of conflict within the review of the Cultural Heritage Assessment submitted as part of the application, the general conclusions regarding the potential impact on cultural heritage assets are not debated. As such, having carefully considered the comments received, Officers do not consider that the proposed development will unacceptably adversely affect or harm the setting of the identified monuments. The proposed development is therefore considered to be compliant with Planning Policy Wales, Technical Advice Note 24 and LDP policies DM13 and RE1.

Public Rights of Way

LDP policy DM13 states that developments will only be permitted where the public rights of way network or other recreation assets listed in Policy SP7 (3) are enhanced and integrated within the layout of the development proposal; or appropriate mitigation measures are put in place where necessary.

A number of public rights of way are located within or adjacent to the site and it is anticipated that during the continued operation of the wind turbine development that these will remain unaffected. Officers consider that it is likely that there will be some effect on access during the decommissioning phase however note that these will be dealt with at the time by applications for temporary closures/diversions and temporary suspension of open access rights.

Following discussions with Powys Rights of Way Officers, improvements have been offered by the applicants and include the fitting of a bridleway gate at the A470 access, a pedestrian gate on footpath 322 near to turbine 15 and the provision of an alternative way marked route to allow horse riders and other users to maintain a greater distance from turbines 18 and 21. Should Members be minded to grant consent, it is recommended that the above mitigation measures be secured by an appropriate planning condition.

Countryside Services (and Powys Ramblers) have raised the possibility of obtaining contributions to offsite improvements to the network. In response to this request, the applicants' agent has stated the following;

'At our meeting on the 25th October 2016, Nina Davies requested a financial contribution towards funding Powys Public Rights of Way network. Welsh Office Circular 13/97 requires planning obligations to be sought only where they are (i) necessary; (ii) relevant to planning; (iii) directly related to the proposed development; (iv) fairly and reasonably related in scale and kind to the proposed development; and (v) reasonable in all other aspects;

It is important to note that this proposal relates solely to the continued operation of the wind which has been in situ for over 23 years and which, as far as we are aware, has not generated any complaints in respect of the PRow network during this time. We have considered the request for financial contribution against the tests set out Circular 13/97 and cannot see a direct relationship between the planning obligation and the planning permission. We are therefore of the view that it is not evidenced to be necessary to make the proposal acceptable in land use planning terms and are not willing to enter into an agreement on this matter. We have agreed to a number of on-site improvements sought by Countryside Services in respect of PRow network and consider these to be adequate mitigation/enhancement'.

Having carefully considered the potential impacts on the public rights of way network, Officers are satisfied that subject to an appropriate condition securing the implementation of the mitigation measures identified above, it is not considered that the proposed development will have an unacceptable adverse impact on the public rights of way network or the amenity of its users. The proposed development is therefore considered to be compliant with policy DM13.

Decommissioning & Restoration

Policy RE1 of the LDP renewable energy proposals will only be permitted where satisfactory mitigation is in place to reduce the impact of the proposal and its associated infrastructure. Proposals shall make provision for the restoration and after-care of the land for its beneficial re-use.

The application provides the opportunity to revisit and improve the condition relating to the decommissioning and restoration of the site once the turbines have ceased generating energy. The applicant has proposed the following condition:

"Not less than 12 months before the expiry of the permission, a decommissioning and site restoration scheme shall be submitted to the Local Planning Authority for its written approval. The decommissioning and site restoration scheme shall include provision for: the removal of all above-ground elements; the removal of turbine bases to 0.6m below ground level; and restoration of the disturbed areas. The decommissioning and site restoration must be completed in accordance with the approved scheme within the period set out in the approved scheme."

Having considered the revised condition and consistent with similar proposals, it is considered that the above condition satisfies the requirements of Welsh Government Circular 016/2014 – The Use of Planning Conditions for Development Management.

Planning Obligations

Policy DM1 states;

Planning obligations will be sought by agreement with applicants, where necessary, to ensure that:

1. The development provides for adequate infrastructure necessary to serve the proposal, and that satisfactory maintenance and / or restoration arrangements are achieved;
2. Significant adverse socio-economic and environmental impacts are addressed and mitigated;
3. Benefits are secured in the public interest to meet the additional demands of development proposals on local communities.

Where on-site provision or mitigation is not appropriate, off-site provision, or a financial contribution towards it, may be sought.

The approval granted in 1993 was subject to a number of financial obligations which were secured by Section 106 legal Agreements. It is envisaged that the contributions listed below will continue over the proposed extended period of operation;

- £5000 per annum contribution to a fund for environmental improvements on two of the affected farm holdings;
- £5000 per annum to a Community Fund for public and Community benefits of the inhabitants of Rhayader and St Harmon and a 'one off' payment of £4000 to offset/remedy impairment of TV reception resulting from operation of the wind farm.

- The setting up of a Trust fund of £100,000 to sponsor and support educational projects within Radnorshire.

As set out in the application documents, in addition to the above, the applicant is to voluntarily provide an enhanced contribution of £2,500 per MW per annum for the additional eight years of operation.

With regard to the funding of environmental improvements which were secured by way of a Planning Obligation dated 9th August 1993 (£5000 per annum to be paid into an account to be disbursed by the Council for use by the then CCW) NRW have asked whether this could be reviewed to facilitate extending improvements beyond the areas previously defined.

The applicant's agents were contacted in this regard and have responded as follows:

'In principle, my Client is open to the suggestion of modifying the agreement to encompass a wider area, as suggested by Natural Resources Wales, subject to the same level of funding as previously. May I suggest that you make a recommendation to the Committee on the basis that the resolution to permit would grant officers delegated powers to agree the detailed terms of the legal agreement and the detailed wording of conditions'

Clarify is still being sought on the above and whether it would comply with the tests for planning conditions and obligations. An update report will be provided prior to the Committee meeting to address this issue.

Safety Lighting

The Ministry of Defence (MOD) has requested that consideration be given to the retro-fitting of both perimeter and cardinal turbines with omni-directional red or infra-red lighting to flash at intervals on one second. In response, the applicants have questioned the necessity/reasonability of this request given the well-established nature of the wind farm and a lack of evidence to the effect that the array has presented a hazard to low flying aircraft. They also state that:

'Retrofitting lighting to existing turbines would involve designing and procuring bespoke lighting; this would be a time-consuming process which will result in the lights only actually being operational for a very short period of time prior to decommissioning.'

Welsh Government Circular 016/2014 requires that conditions are only imposed where they are (i) necessary; (ii) relevant to planning; (iii) relevant to the development to be permitted; (iv) enforceable; (v) precise; and (vi) reasonable in all other respects. The condition proposed by the MoD is not evidenced to be necessary or relevant to the development to be permitted (i.e. the life extension), and is considered to make unjustifiable demands on a wind farm that has been operating without giving rise to aviation issues for over two decades.'

Whilst Officers acknowledging that lighting technology has advanced since the original grant of consent, it is considered that the introduction of new lighting may result in unacceptable impacts in terms of ecology or landscape/visual. Furthermore, as no evidence has been

provided to demonstrate that the site adversely affects low flying aircraft during its years of operation, Officers would concur with the comments of the applicant, and therefore, in these circumstances it is not recommended that a condition be placed requiring the retrofitting of lighting on any consent.

RECOMMENDATION

Having carefully considered the material presented in support of the planning application, including the detailed assessments provided in the accompanying Environmental Impact Assessment, it is concluded that the extension of the operating life of Bryn Titli wind farm is in accordance with planning policy. Subject to no objection from the Councils Ecologist the recommendation is one of approval subject to the conditions detailed below.

Conditions:

1. The development hereby permitted shall cease operation 33 years after the first export of electricity from the site.

2 Not less than 12 months before the expiry of the permission, a decommissioning and site restoration scheme shall be submitted to and approved in writing by the Local Planning Authority. The decommissioning and site restoration scheme shall include provision for the removal of all above-ground elements; the removal of turbine bases to 0.6m below ground level; and restoration of the disturbed areas. The decommissioning and site restoration must be completed in accordance with the approved scheme within the period set out in the approved scheme.

3. A Traffic Management Decommissioning Plan shall be submitted to and approved in writing by the Local Planning Authority prior to the decommissioning of the site. Thereafter, the development shall be undertaken strictly in accordance with the Traffic Management Decommissioning Plan as approved.

4. Not less than 6 months prior to the expiry of planning permission R4297D, an access scheme shall be submitted to and approved in writing by the Local Planning Authority. The access scheme shall include: a plan identifying the alternative waymarked route; provision for the replacement of the gate at the site entrance; and provision for the installation of a pedestrian gate on footpath 322 near T15. The access scheme shall be implemented as approved prior to the expiry of planning permission R4297D, i.e by 29th June 2019.

5. The rating level of noise emissions from the combined effects of the wind turbines hereby permitted (including the application of any tonal penalty and amplitude modulation (AM) penalty), when determined in accordance with the attached Guidance Notes, shall not exceed the values for the relevant integer wind speed set out in or derived from the table attached to these conditions and:

A) Within 21 days from receipt of a written request of the Planning Authority, following a complaint to it alleging noise disturbance at a dwelling, the wind farm operator shall, at its expense, employ an independent consultant and provide a written protocol to be approved by the Planning Authority. The protocol shall describe the procedure to assess the level and character of noise immissions 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 Planning Authority shall set out as far as possible the time or meteorological conditions to which the complaint relates and time or conditions relating to tonal noise or AM if applicable. Measurements to assess compliance with the noise limits shall be undertaken in accordance with the assessment protocol which shall be approved in writing by the Planning Authority.

B) Where there is more than one property at a location specified in the table attached to this condition, the noise limits set for that location shall apply to all dwellings at that location. Where a dwelling to which a complaint is related is not identified by name or location in the table attached to these conditions, the wind farm operator shall submit to the Planning Authority for written approval proposed noise limits selected from those listed in the table to be adopted at the complainant’s dwelling for compliance checking purposes. The proposed noise limits are to be those limits selected from the tables specified for a listed location which the independent consultant considers as being likely to experience the most similar background noise environment to that experienced at the complainant’s dwelling. The submission of the proposed noise limits to the Planning Authority shall include a written justification of the choice of the representative background noise environment provided by the qualified Acoustician. The rating level of noise immissions resulting from the combined effects of the wind turbines when determined in accordance with the attached Guidance Notes shall not exceed the noise limits approved in writing by the Planning Authority for the complainant’s dwelling.

C) The wind farm operator shall provide to the Planning Authority the independent consultant's assessment of the rating level of noise immissions undertaken in accordance with the protocol within 2 months of the date of the approval of the protocol by the Planning Authority unless otherwise agreed by the 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 a format to be agreed with the Planning Authority. Certificates of calibration of the equipment shall be submitted to the Planning Authority with the report.

D) Where a further assessment of the rating level of noise immissions from the wind farm is required pursuant to Guidance Note 5 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 initial assessment unless otherwise agreed by the Planning Authority.

Informative Notes

Note: For the purposes of condition 5, a “dwelling” is a building within Use Classes C1, C3 and C4 of the Town and Country Planning (Use Classes) Order 1987 (as amended) which lawfully exists or had planning permission at the date of this permission.

Table - Noise Level at All Times - dB L_{A90}, 10-minute

Location (easting, northing grid)	Standardised wind speed at 10 metres height (m/s) within the site averaged over 10-minute periods
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coordinates)	1	2	3	4	5	6	7	8	9	10	11	12
	L _{A90} Decibel Levels											
Glascwm House (291940, 276715)	36	36	36	37	38	40	41	43	44	46	46	46
Neuadd-ddu (291971, 275364)	36	36	36	37	38	40	41	43	44	46	46	46
Dernol Old School (291847, 274584)	39	39	39	40	40	41	43	43	43	43	43	43
Dolhelfa-ganol (292799, 273876)	36	36	36	37	38	40	41	43	44	46	46	46
Dolhelfa Uchaf (292493, 274167)	36	36	36	37	38	40	41	43	44	46	46	46
Dolhelfa-isaf (293530, 273318)	35	35	35	35	36	38	40	42	43	45	45	45
Gwen Fron (294878, 276865)	35	35	35	35	36	38	40	42	43	45	45	45
Ysgubar Dollech (292024, 274280)	39	39	39	40	40	41	43	43	43	43	43	43
Croesty (291702, 274901)	39	39	39	40	40	41	43	43	43	43	43	43
Dernol Farm (291486, 274877)	35	35	35	35	36	38	40	42	43	45	45	45
Tan-Y-Berth (291450, 275289)	39	39	39	40	40	41	43	43	43	43	43	43
Brithdir (291033, 275762)	35	35	35	35	36	38	40	42	43	45	45	45
Panty-Y-Drain (291323, 276305)	35	35	35	35	36	38	40	42	43	45	45	45
Tyncoed (291928, 276230)	36	36	36	37	38	40	41	43	44	46	46	46
Ty-Mawr (292545, 273234)	39	39	39	40	40	41	43	43	43	43	43	43
Safn-y-coed (292869, 273319)	39	39	39	40	40	41	43	43	43	43	43	43

Note to Table: The geographical coordinates references set out in the table are provided for the purpose of identifying the general location of dwellings to which a given set of noise limits applies. The standardised wind speeds at 10 metres height within the site refers to wind speeds at 10 metres height derived from those measured at hub height, calculated in accordance with the method given in the Guidance Notes.

Guidance Notes for Noise Condition

These notes are to be read with and form part of the planning condition on noise. The measured data is to be split into bins as described below. The rating level in each bin is the arithmetic sum of the wind farm noise level, any tonal penalty applied in accordance with Note 3 and any AM penalty applied in accordance with Note 4. 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). IOAGPG is “A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise” or any update of that report current at the time of measurement. The IOA Metric is “A Method for Rating Amplitude Modulation in Wind Turbine Noise” dated 9th August 2016 or any update of that current at the time of measurement.

Note 1 – Data Collection

a. Values of the LA90,10-minute noise index shall be measured in accordance with the IOAGPG. Measurements shall be undertaken in such a manner to enable a tonal penalty to be calculated and to allow an AM penalty to be calculated for selected periods where a tonal or AM assessment is required.

b. 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 mean wind direction in degrees from north in each successive 10-minutes period in a manner to be agreed in writing with the Planning Authority. The wind speed 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 are correlated with the noise measurements determined as valid. The wind farm operator shall continuously log arithmetic mean nacelle anemometer wind speed, arithmetic mean nacelle orientation, arithmetic mean wind direction as measured at the nacelle, arithmetic mean rotor RPM and whether each wind turbine is running normally during each successive 10-minutes 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 Universal Time (UT).

Note 2 – Data Analysis

a. The independent consultant shall identify a sub-set of data having had regard to:-

- the conditions (including time of day and corresponding wind directions and speeds) at times in which complaints were recorded;
- the nature/description recorded in the complaints if available;
- information contained in the written request from the local planning authority;
- likely propagation effects (downwind conditions or otherwise);
- the results of the tonality/AM analysis where relevant.

In cases where it is possible to identify patterns of clearly different conditions in which complaints have arisen additional sub-sets may be considered provided this does not introduce unreasonable complexity in the analysis and can be justified by the independent consultant.

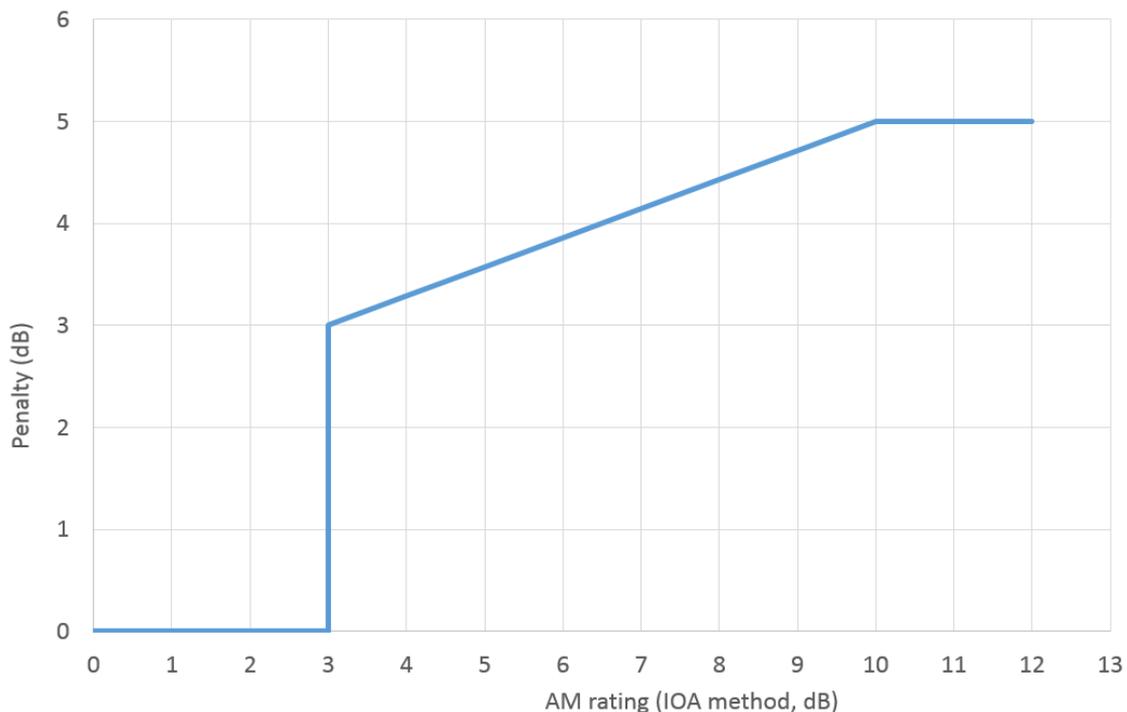
b. Within each of the sub-set(s) of data identified, data shall be placed into separate 1 m/s wide wind speed bins.

Note 3 – Tonal Penalty

- a. Where, in accordance with the protocol, the noise contains or is likely to contain a tonal component, a tonal audibility shall be calculated for each ten-minute period using the following procedure.
- b. For each 10-minute period for which a tonal assessment is required this shall be performed on noise immissions during 2-minutes of each 10-minute period. The 2-minute periods should be spaced at 10-minute intervals provided that uninterrupted uncorrupted data are available ("the standard procedure").
- 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. Samples for which the tones were below the audibility criterion or no tone was identified, a value of zero audibility shall be substituted. Where data for a ten-minute period are corrupted, that period shall be removed from the tonal analysis.
- d. The tone level above audibility for each ten-minute period shall be placed in the appropriate data sub-set and wind speed bin.

Note 4 – AM Penalty

- a. Where, in accordance with the protocol, the noise contains or is likely to contain AM, an AM penalty shall be calculated for each ten-minute period using the following procedure.
- b. For each 10-minute interval for which an AM assessment is required this shall be performed in accordance with The IOA Metric. The value of AM for each ten-minute period shall be converted to a penalty in decibels in accordance with the graph below and the penalty shall be placed in the appropriate data sub-set and wind speed bin. Where a penalty is zero it shall be placed in the bin in the same way.



Note 5 – Calculation of Rating Level

- a. The L_{A90} sound pressure level for each data sub-set and wind speed bin is the arithmetic mean of all the 10-minute sound pressure levels within that data sub-set and wind speed bin except where data has been excluded for reasons which shall be clearly identified by the independent consultant. The tonal penalty for each bin is the arithmetic mean of the separate 10-minute tonal audibility levels in the bin converted to a penalty in accordance with Fig 17 on page 104 of ETSU-R-97. The AM penalty for each bin is the arithmetic mean of the AM penalties in the bin. The assessment level in each bin is normally the arithmetic sum of the bin L_{A90} , the bin tonal penalty and the bin AM penalty except where the AM penalty and the tonal penalty relate to the same characteristic (e.g. amplitude modulated tones) when the sum of both penalties may overly penalise the characteristics of the noise. Such cases shall be identified and only the larger of the AM or tonal penalty shall be applied.
- b. If the assessment level in every bin lies at or below the values set out in the Table(s) attached to the conditions then no further action is necessary. In the event that the assessment level is above the limit(s) set out in the Tables attached to the noise conditions in any bin, the independent consultant shall undertake a further assessment of the rating level to correct for background noise so that the rating level relates to wind turbine noise immission only. Correction for background noise need only be undertaken for those wind speed bins where the assessment level is above the limit.
- c. The wind farm operator shall ensure that all the wind turbines in the development are turned off for such periods 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 1, with the wind farm switched off, and determining the background noise (L_3) in each bin as required in the protocol. At the discretion of the consultant and provided there is no reason to believe background noise would vary with wind direction, background noise in bins where there is insufficient data can be assumed to be the same as that in other bins at the same wind speed.
 - ii. The wind farm noise (L_1) in each bin shall then be calculated as follows where L_2 is the measured level with turbines running but without the addition of any tonal nor AM 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 and AM penalties to the derived wind farm noise L_1 in that bin.
- iv. If the rating level after adjustment for background noise contribution and adjustment for tonal and AM penalties in every bin lies at or below the values set out in the Tables attached to the condition 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 table attached to the condition

then the development fails to comply with the planning condition in the circumstances represented by that bin.

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