

SITE LAYOUT

Project:
**Brenig Wind Farm Tip
 Height Extension,
 Denbighshire**

Title:
Figure 4.1: Site Layout

- Key**
- Site boundary
 - Consented turbine location
 - ▲ Consented anemometry mast location
 - Existing forest roads to be upgraded
 - Consented new tracks
 - Consented new track (not to be used for turbine delivery)
 - Consented switching & metering building location
 - Consented construction compound
 - Potential borrow pit location


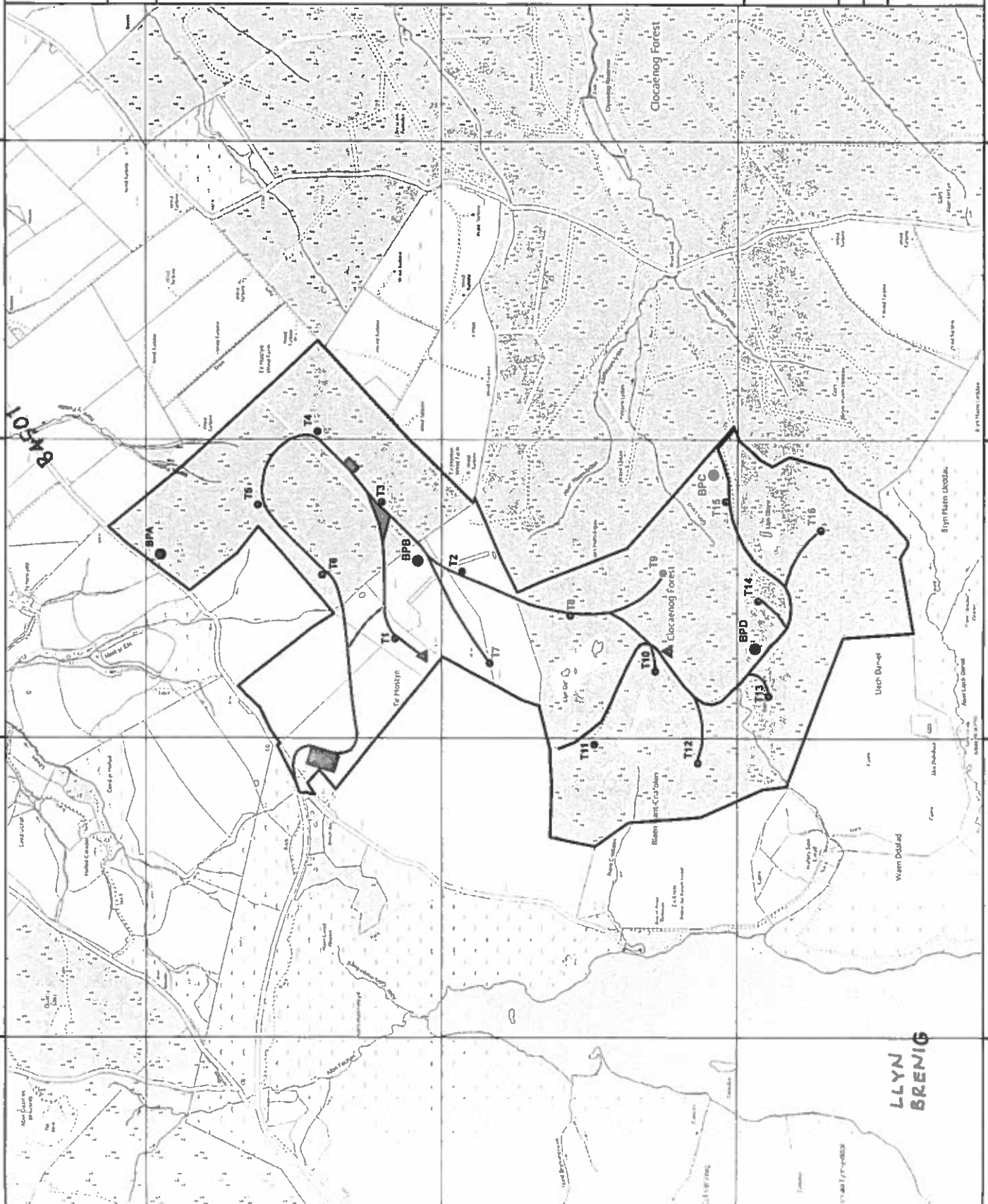
Notes:
 The site is shown as a single area and does not represent the actual site boundaries. Where further clarification is considered necessary, this is noted through the use of last bears on the map sheet.
 1. Where a line is shown in the key, it indicates a boundary on the plan, the boundary edge is the outside edge of the line.
 2. Where a line or feature is shown in the key, it indicates a boundary on the plan, the boundary edge is the outside edge of the line.
 3. Where a line or feature is shown in the key, it indicates a boundary on the plan, the boundary edge is the outside edge of the line.
 4. Natural Power Consultants Ltd. accepts no responsibility for the accuracy of data supplied by third parties.

Scale @ A3: 1:12,500
 Ordnance Survey, British National Grid
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0 125 250 500 m

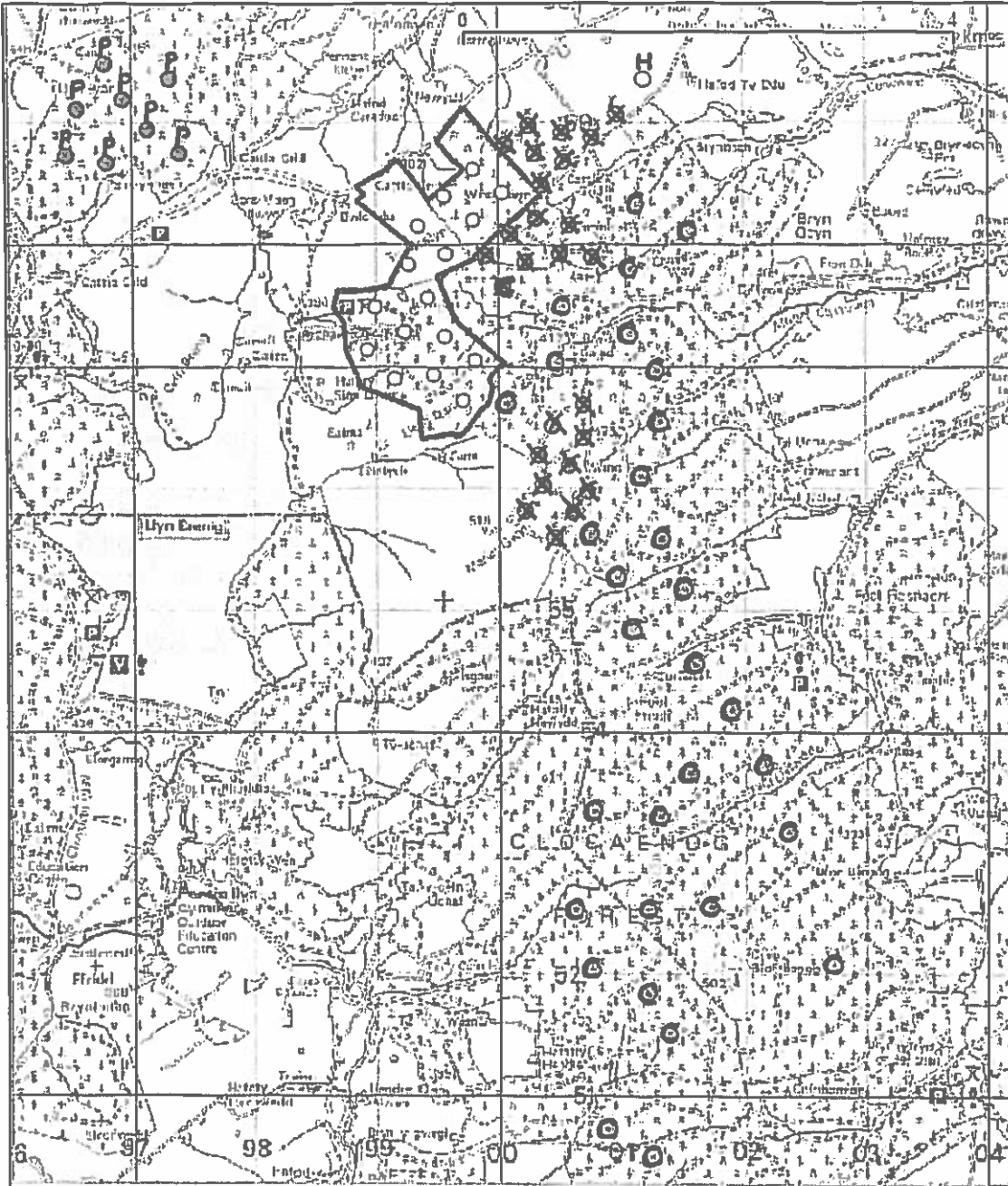
Date: 05-05-15 **Prepared by:** CT **Checked by:** JEB
Ref: GB200464_M_103_F **Layout:** 260107_161_A

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**LLYN
 BRENIG**

WIND TURBINE SITES IN THE AREA



- Brenig turbines
- Ⓟ Pant y Maen turbines (UNDETERMINED APPLICATION)
- ⓧ Tir Mostyn turbines (OPERATING)
- Ⓞ Clocaenog Forest turbines (AS CONSENTED)
- Ⓜ Hafody Du turbine (OPERATING)

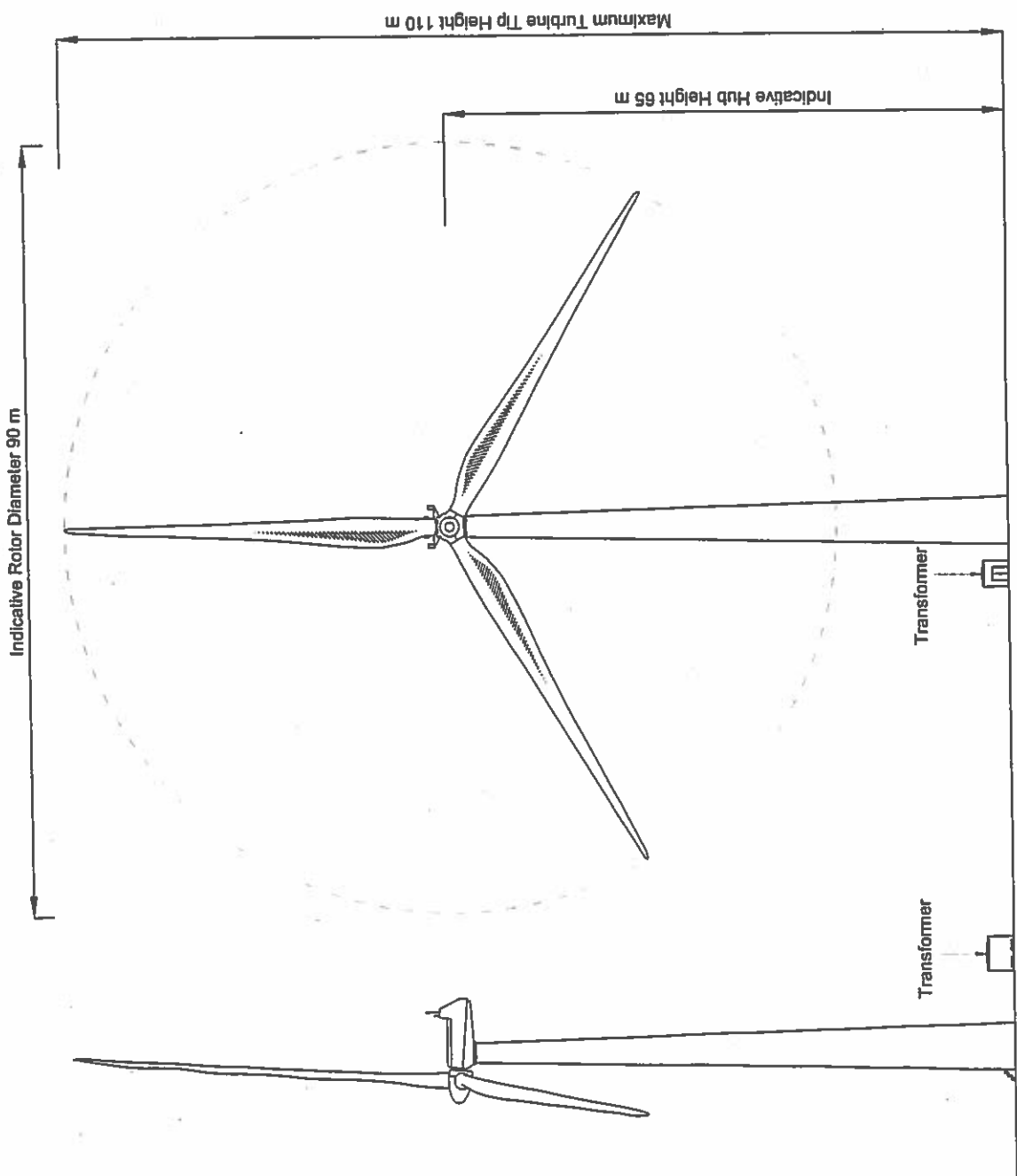

TYPICAL TURBINE DETAIL

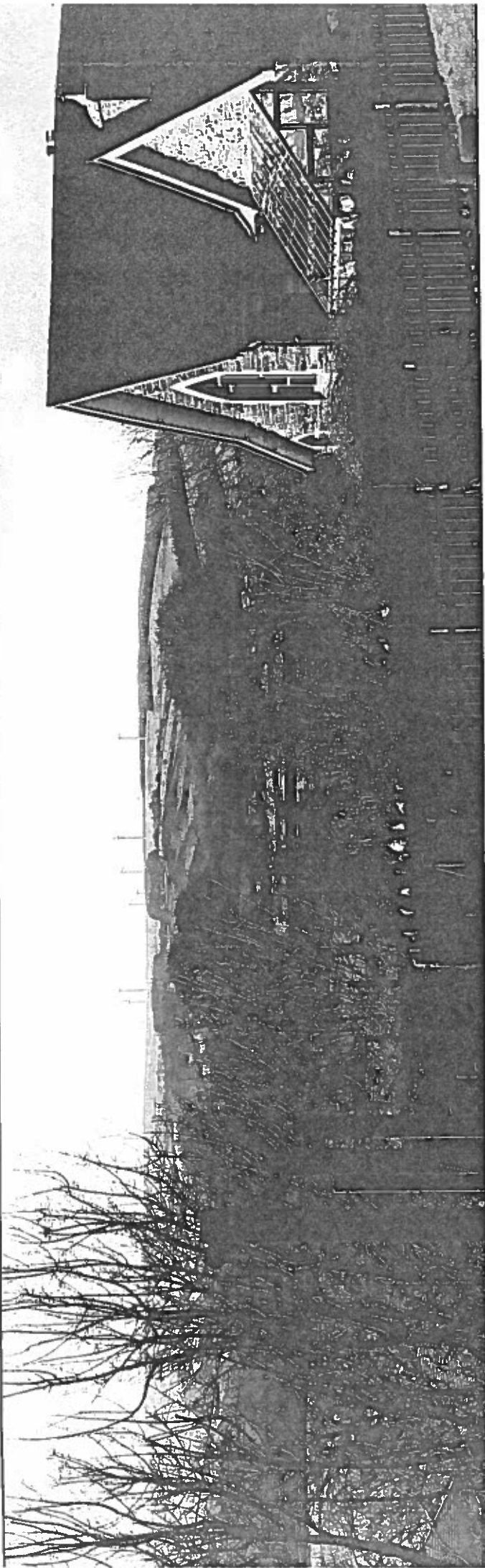
Project:
**Brenig Wind Farm Tip Height
Extension, Denbighshire**

Title:
**Figure 4.2: Typical Turbine
Specification**

Scale: 1:500 @ A3
Date: 05-05-16 Prepared by: IW Checked by:
Ref: G8200484_D_029_A

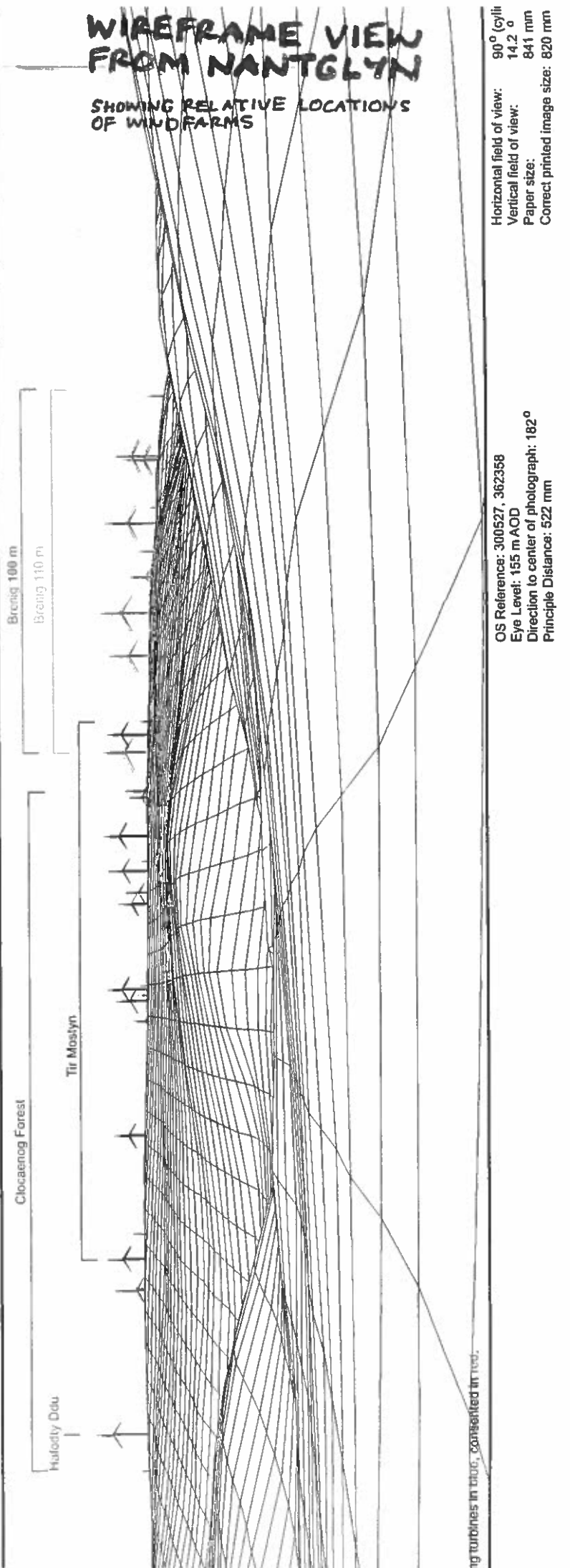
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WIREFRAME VIEW FROM NANTGLYN

SHOWING RELATIVE LOCATIONS OF WIND FARMS



Horizontal field of view: 90° (cyl)
 Vertical field of view: 14.2°
 Paper size: 841 mm
 Connect printed image size: 820 mm

OS Reference: 300527, 362358
 Eye Level: 155 m AOD
 Direction to center of photograph: 182°
 Principle Distance: 522 mm

ing turbines in this, consented in red.

WIREFRAME REPRESENTATION OF HEIGHT DIFFERENCES FROM 100m TO

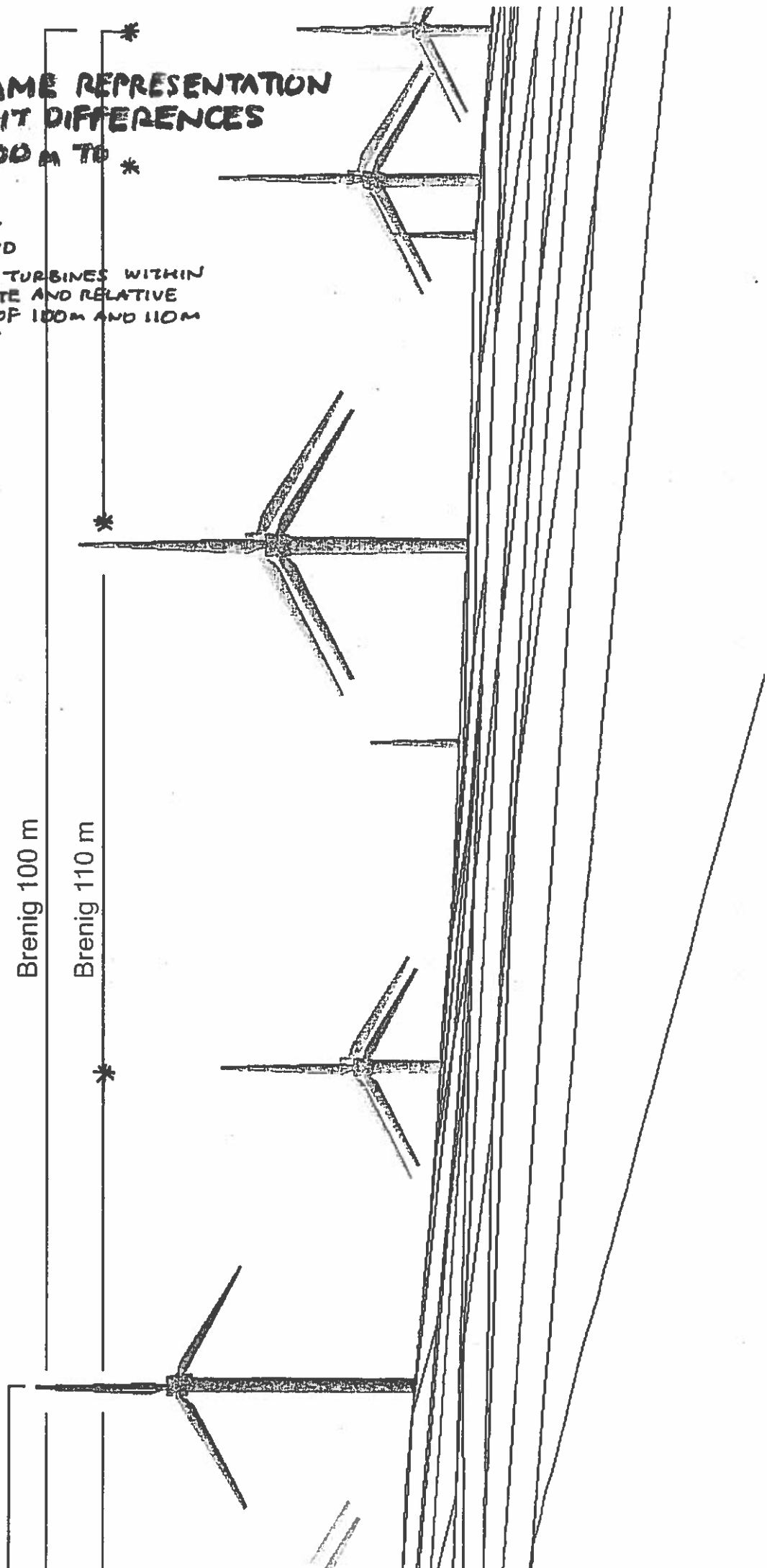
110m
EXTRACT IS
VIEWPOINT AT
GARREG LLWYD

* IDENTIFIES TURBINES WITHIN
BRENIQ SITE AND RELATIVE
PROFILES OF 100m AND 110m
MACHINES

TIR MOSTYN
TURBINE

Brenig 100 m

Brenig 110 m

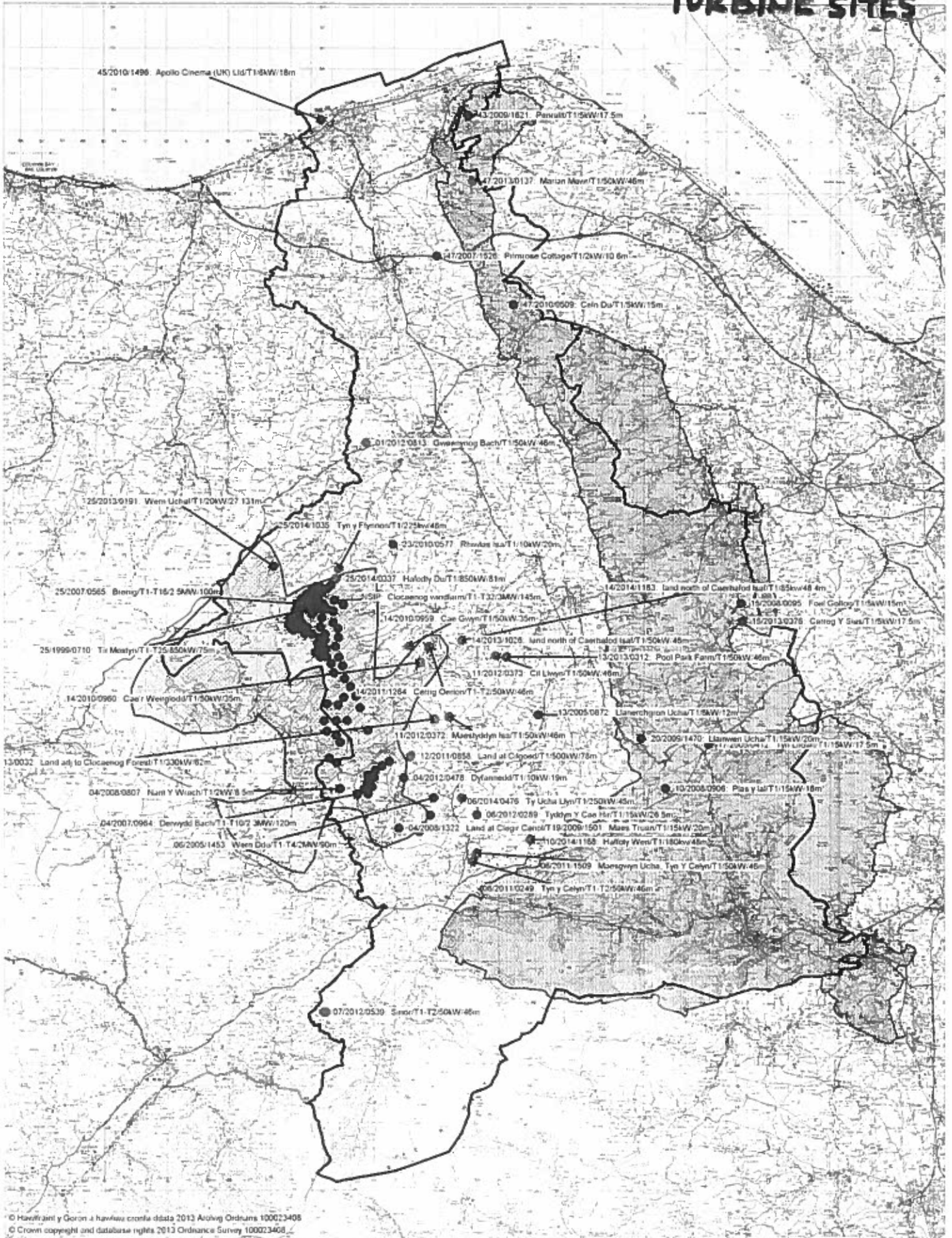




Scale: 1: 165000
 Date: 26/10/2015
 Map Sheet



LOCATION OF TURBINE SITES



WARD : Llanrhaeadr Yng Nghinmeirch

WARD MEMBER: Cllr Joseph Welch (c)

APPLICATION NO: 25/2015/0636/ PFWF

PROPOSAL: Construction and operation of a wind farm comprising of sixteen wind turbines along with transformers, access tracks, on-site switchgear and metering building, two anemometry towers and associated construction and operation infrastructure (revised scheme partially implemented under planning permission reference 25/2007/0565)

LOCATION: Land East of Llyn Brenig Nantglyn

APPLICANT: Brenig Wind Limited

CONSTRAINTS: None

PUBLICITY UNDERTAKEN: Site Notice – Yes
Press Notice – Yes
Neighbour letters - Yes

REASON(S) APPLICATION REPORTED TO COMMITTEE:
Scheme of Delegation Part 2

- Recommendation to grant / approve – 4 or more objections received
- Recommendation to grant / approve – Town / Community Council objection
- Member request for referral to Committee

CONSULTATION RESPONSES:

NANTGLYN COMMUNITY COUNCIL

“Following a meeting on 7th July 2015, I am writing to you on behalf of Nantglyn Community Council to give a formal objection on the above planning application due to the following reasons:

Cumulative Noise – The existing wind turbines at the Tir Mostyn and Foel Goch wind farm already create noise issues for the residents of Nantglyn, with a number of noisy days throughout the year. The addition of the Brenig wind farm will add significantly to the number of noisy days. The proposed increase to the tip height of the wind turbines, will increase the number of noisy days experienced yet again due to their increased size. We already have a large number of turbines in the area and the 'arc' of these wind turbines is constantly widening.

Visual Impact – The proposed development will be visible for miles, and will not blend in with the landscape, it will stick out and be unsightly. To say that there would not be a change in visual effects from the original granted application is untrue, the increase in height of 10 metres is the same as a three storey house. The swept area increase is significantly more than originally consented. They are bigger than the existing wind turbines and so will have more of visual impact.”

LLANRHAEADR Y.C. COMMUNITY COUNCIL

“Llanrhaeadr yng Nghinmeirch Community Council strongly object the planning application for Brenig Wind Farm Tip Height Extension.

The difference in tip height would be extremely damaging to the area and would have overwhelming negative effects.

The significant cumulative effects on landscape and noise would be overbearing for residents. The two existing wind farms are enough.

The proposed application would be excessive to say the least. With an increase in hub height and swept area which would be more than treble the existing wind turbines.

This proposal is significantly detrimental to areas much further than the Llanrhaeadr yng Nghinmeirch parish due to its vast scale.

We also have concerns on the impact on tourism and the local economy, not only in Llanrhaeadr yng Nghinmeirch but also the surrounding area.

This application can not be viewed in isolation. If it is granted, the cumulative impact of existing tir Mostyn and Foel Goch Wind Farms, individual wind turbine, consented Clocaenog wind farm and the three associated wind farms, the connecting pylon route and substation will leave a lasting social and economic scar on Denbighshire.

The council has a responsibility for the longterm wellbeing of its residents. We urge you to take a strong stance and reject this proposal.”

DENBIGH TOWN COUNCIL

“, does not wish to raise any objection to the application”.

CLWYDIAN RANGE AND DEE VALLEY AONB JOINT COMMITTEE

“The AONB objected to the original application on the grounds of its serious harmful impact on distant views from the AONB, notably for users of the Offa’s Dyke National Trail and Moel Famau Country Park. Serious concerns were also raised about the cumulative effect of the proposals when taken in conjunction with existing and consented windfarms in the area which would undermine the special qualities of the AONB as a nationally protected landscape. Increasing the height of the turbines from 100m to 110m and associated substantial increase in the swept area of the blades will have an even more harmful impact on the setting and special qualities of the AONB. The Joint Committee therefore maintains its objection to the application.”

CONWY COUNTY BOROUGH COUNCIL

Has no comments to make on the application as neighbouring planning authority.

SNOWDONIA NATIONAL PARK AUTHORITY

Has concerns over the landscape and visual impacts of the proposals on a nationally designated area and its landscape setting. Refer to the impression from certain viewpoints that there will be a ‘stacking’ of turbines giving the impression of a very dense cluster, and potential diminution of enjoyment of the expansive view across towards Snowdonia from the Moel Fammau area for Offa’s Dyke Footpath walkers, by the intervention of the wind farms. Suggest walkers will see the Brenig windfarm backclothed against the mountains of Snowdonia, including, from some locations, the Snowdon massif itself, and that it is perhaps from these locations that the harmful effect on Snowdonia’s landscape setting is most clearly demonstrated with the mountains appearing to be ‘fenced in ‘.

NATURAL RESOURCES WALES

Does not object to the proposal, subject to the requirements of the current consent being part of any new consent, and two additional conditions relating to bats and peat.

In relation to landscape, NRW note that the site is within the TAN 8 Strategic Search Area for renewable energy, which recognises that major change to the landscape is expected to take place – within and immediately adjoining the area. Reference is made to the legislative context requiring due consideration of effects on Registered landscapes, the AONB and the Snowdonia National Park, which may be affected.

NRW’s assessment notes the site abuts the Mynydd Hiraethog Registered Historic Landscape and proximity to the Vale of Clwyd Registered Historic Landscape (8km to the east), the AONB

(16km to the east) and Snowdonia National Park (13.5km to the west), and it refers to the assessments of impact in the submission. NRW concur with –

- the LVIA assessment that the visual effects on statutory designated landscapes and the Registered Historic landscapes to not be significant, within the baseline context of the consented and operational wind development within the locality.

- the ASIDHOL2 assessment of visual effects upon parts of the Mynydd Hiraethog registered historic landscape and a large extent of Vale of Clwyd registered historic landscape to be moderate. It is not considered that the effect would be significant within EIA regulation terms.

In summary, NRW consider the changes to landscape and visual amenity of landscapes of National Parks, AONBs and sites on the Register of Landscapes of Historic Interest in Wales, judged against the consented and operational wind development in the area, would not result in significant effects, hence do not object to the proposal.

In relation to other matters, NRW have referred to considerations relating to Geoscience, Flood risk and surface water, environment management, nature conservation sites, peat, and protected species. No objections are raised to the proposals in respect of anticipated impacts, provided previous controls are attached and proposed mitigation is carried out, and appropriate additional conditions are attached relating to management of surface water, Construction methodology, management of peat loss, and a Surveillance strategy and Curtailment plan in relation to bats.

CADW

Note there is a partially implemented permission for the turbines and that this application seeks to increase the height of the turbines from 100m to 110m. Draw attention to the proximity to designated monuments which form a relict prehistoric ritual landscape – Bwlch Du round barrow, Hen Ddinbych Circular Platforms, Circular Platforms north west of Hen Ddinbych, and Twr yr Hill Round Barrow; and a number of other monuments within a 5m ZTV and within a 5km buffer. Whilst the assessment of the impact of the development in the Environmental Statement raises concerns over the scope and validity of the archaeological assessment undertaken in relation to the previous, consented scheme, CADW agree with the conclusions of the Environmental Statement that the impact of the proposed 110m turbines on the settings of the designated monuments referred to will not be any more adverse than that of the consented scheme. CADW does not therefore object to the impact of the proposed increase in turbine height on these designated monuments.

CLWYD POWYS ARCHAEOLOGICAL TRUST

Has no objection to the proposed increase in height by 10 metres but requests that the identified Significant impacts are given due consideration and agreed mitigation is carried out as a condition of any permission.

AIRBUS

No aerodrome safeguarding objection.

NATS / NERL

Development does not conflict with safeguarding criteria, hence no safeguarding objection to the proposal.

MOD

Due to the proximity of the turbines to existing wind farms, MOD will be content for IR lighting to be fitted to specified turbines.

DWR CYMRU WELSH WATER

No comments.

DENBIGHSHIRE COUNTY COUNCIL CONSULTEES –

Head of Highways and Infrastructure

- Highways Officer

Draft Traffic Management Plan appears to be satisfactory in relation to the abnormal load deliveries, but additional information will be required for standard HGV deliveries.

- Pollution Control Officer

The Council has engaged the external Noise Consultant used previously for advice on larger wind farm development in Denbighshire. The Consultant has provided a detailed 10 page response dealing with the baseline position, turbine noise from the development, cumulative assessment, and suggestions for conditions and limits should consent be given. In summary, the Consultant's recommendation is that there is no reason to refuse permission on grounds of noise provided the suggested conditions are imposed.

The full version can be viewed on the website alongside other consultation responses.

There is considerable technical content in the response which are not easy to summarise, so the key contents are reproduced below:

“BASELINE

No further background noise levels were measured for this application. I agreed informally with the applicant's consultant that, in my opinion, a new baseline survey was unnecessary given the number of previous surveys that have been carried out in the area. In addition there are problems with carrying out such a survey, as was evident in the original surveys taken for the consented scheme, because of the proximity of Tir Mostyn.

The ES sets out in Table 9.1 a comparison of various measured background noise levels with which I do not disagree. However, I would comment on the discussion at 9.3.16 to 9.3.20 of the ES which deals with the noise limits in the original Brenig consent. I think it is clear from the condition in the consent that it is a 10m wind speed and certainly if we take account of context of the limits which relate back to the 2007 Cumulative Report. The 2012 report also makes it clear that the original levels were related to 10m measured wind speeds.

In 2012 my revised cumulative report changed my recommended limits to standardised wind speed though this had no direct effect on the original Brenig limits since they were already determined. I will deal further with the choice of background noise levels in later sections.

TURBINE NOISE FROM THE DEVELOPMENT

The original scheme used the Vestas V80-2MW as a candidate turbine. This needed to be operated in a reduced mode in order to meet the noise limits. For the revised ES there are several different candidate turbines put forward. These vary considerably in noise level – some louder than the original and some quieter. The ES says that all but one can be mitigated to achieve the limits.

The turbine chosen for the calculations is the Senvion MM92 running in one of its reduced modes. I agree with the calculations of turbine noise levels from Brenig individually at Table 9.8 of the ES based on the candidate turbine.

CUMULATIVE ASSESSMENT

The site lies within Strategic Search Area A of TAN 8. It is therefore expected that wind farms will be consented in this area and that there will be significant cumulative impacts. It was with this in mind that the 2007 cumulative report was produced for Denbighshire Council. The purpose of this was to propose a strategic approach to the cumulative issue by adopting individual noise limits for each application that were designed ensure that the risk of cumulative exceedance at any property was low. To get round the problem of trying to measure background noise influenced by existing turbines the report also proposed a set of standard background noise levels (related to measured 10m wind speeds) which could be used instead of measuring background noise on site. The 2012 cumulative report is an update to the original and provides revised background noise levels related to standardised wind speeds. The methodology in the 2007 Cumulative Report is referred to in the Institute

of Acoustics Good Practice Guide. The procedure is based on achieving a cumulative limit of 5dB above background noise or 38dB and is the same night and day. The original Brenig consent had individual limits based on these background noise levels.

9.3.21 of the ES relates that the Clocaenog Forest Wind Farm decision by Welsh Ministers said that the cumulative limit by which that wind farm should be judged should be 40dB or 5dB above background noise. Whilst this is correct, the cumulative limit of 40dB was determined (rather than 38dB as requested by the Council) in part at least because of the size of the Clocaenog Forest wind farm (4.134 of the Examining Authority's report) which is over twice as large as Brenig. There is no reason therefore why 40dB should be applicable to other wind farms such as Brenig.

There is some assessment of cumulative noise in the ES. However, this has not been carried out in accordance with the IOAGPG – particularly as regards the use of noise limits to determine the cumulative impact rather than calculated turbine noise. However, if the individual noise limits set out in the next section are imposed and accepted by the developer I do not recommend that a more comprehensive cumulative assessment is made.

CONDITIONS AND LIMITS

I append to this memo a set of conditions that I recommend should be included should consent be given. Although I have some reservations about the complexity of the condition it is essentially the same condition as recommended by the IOAGPG and widely used but with a few corrections, clarifications and simplifications.

The limits in the conditions are those in the 2012 Cumulative Report. As mentioned above these limits were amended in my 2012 report to take account of current practice (at the time and now). They are essentially the same as in the original Brenig consent but use standardised wind speed. Whilst they appear to be slightly lower at one wind speed that is because the wind speed measurement height has changed not the noise limit. The limits are therefore no more onerous than they were in the original consent.

Ty Newydd and Garreg Lwyd are Financially Involved with Brenig and therefore have a higher individual noise limit.

A further point about the two cumulative reports is that they assumed that turbines were run in the same mode all the time. There are two points here. The first is that the managing of the total cumulative noise at a property using this method was based on the fact that turbines would reduce in noise level as the wind direction moved away from downwind from the turbine to the property concerned. If turbine modes are changed to keep the noise level at the property the same in a wide range of wind directions, as is now becoming common, that will no longer apply. The second point is that where mitigation is applied according to wind direction, although the maximum noise level may remain the same, that maximum will apply in a wider range of wind directions and in other wind directions the noise level would be higher than without directional mitigation. I have therefore added a condition to deal with this."

The Appendix to the Noise Consultant's review sets out detailed noise conditions and guidance notes to applicants which are suggested for appending to any permission

- Biodiversity Officer

Concurs with the assessment of impacts in the ecology section of the Environmental Statement. States the main significant effects of increased height are on bats, and is satisfied at the proposed approach for operational monitoring and mitigation. Proposal is only acceptable if monitoring and mitigation are conditioned.

- Landscape Consultant

Conclusion

The installation of the consented Brenig development is predicted to have significant impacts on landscape character. The *Moorland Plateau (Denbigh Moors)* Landscape Unit is evaluated to have a high sensitivity to wind energy development. Parts of the Landscape Unit are already influenced by developments within SSA-A, consequently those areas already affected have a lower sensitivity. The proposed change is unlikely to significantly increase the impact upon the *Moorland Plateau* landscape unit.

- Commercial forest plantations have already been removed to enable the consented development. There is no proposal to replant and there is no detail of future management proposals in the proposed scheme's written statement. The consented scheme would have to satisfy certain conditions to ensure that ecological impact is minimised or mitigated. The height extension would not significantly increase the impact on the landscape fabric.
- Geological Landscape and Cultural Landscape aspects are unlikely to be adversely affected as a consequence of the height extension. Significantly adverse Visual and Sensory landscape aspects would be restricted to the aspect area in which the development is sited, and those areas of upland immediately adjacent. These affected areas lie within or adjacent to SSA-A, and are already affected by operational wind energy developments or will be affected by consented wind energy developments.
- The Landscape and Visual assessments carried out by Soltys Brewster Consulting are very thorough and present an honest assessment of the predicted development. Baseline photographs, wireline drawings and photomontages are of a high quality. It is clear that best practice guidelines have been followed. Drawings supporting the LVIA such as ZTV and cumulative ZTV that are available on Denbighshire's planning portal are of a poor quality. Some data is missing and background maps aren't clear.
- Near and significant views of the consented development would be available from transport routes, open access areas, national trails, and dwellings. It would be difficult to evaluate the difference in height of installed wind turbines when there is no direct comparison. The height extension would mean that the turbines are visible from new areas, but these areas would tend to be more distant or partially screened by terrain.
- Intermediate and significant views of the consented development would be available to scattered dwellings, rural businesses, visitor centres, recreational and transport routes on elevated ground surrounding Clocaenog Forest and Mynydd Hiraethog. The development may be seen as contiguous with operational wind energy developments, and would increase the influence wind energy infrastructure would have on views. The height extension would not increase this cumulative effect.
- Distant views would be available to high ground and hill slopes facing the Clocaenog Forest region. The development may be seen as part of a series of wind energy developments within the Clocaenog 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. Within a broad and large scale landscape the Brenig wind farm proposal would be seen as a prominent feature until other consented developments are operational. The difference in height of the proposed scheme would be negligible when viewed from long distance.
- Having reviewed the effect of the proposal upon the character of the surrounding landscape, the visual effects of the proposal within the locality and from more distant views, we consider that the consented windfarm would have a significant detrimental impact on the immediate area of moderate to high scenic value. The change in height however, would be difficult to discern.
- We have also reviewed the implications of cumulative landscape impacts in relation to existing and consented energy development in the area. The local area is already influenced by wind energy development and would be further influenced by consented development. The large scale and open landscape is judged to be able to accommodate large scale windfarm development without unacceptable damage to landscape character and quality.
- We broadly agree with the conclusions of the thorough Landscape and Visual Assessment and on the basis of our assessment we do not consider that the proposed extension of blade tip heights to the consented Brenig windfarm would cause undue landscape and visual impacts and recommend approval of the application

- Archaeologist

No objection provided the archaeological mitigation outlined in the application is carried out.

RESPONSE TO PUBLICITY:

In objection

Michael Skuse, Caenant, Llangynhafal (O)
Mal Brockley, Felin Newydd, Nantglyn (O)
Peter Sandle - Llygad-Yr-Haul, Waen, Nantglyn (o)
Jennifer Sandle - Llygad Yr Haul, Waen, Nantglyn (o)
Judy Young - Nantgwyn, Nantglyn, LL16 5RL (o)
Michael Williams, Isgaerwen, Pentrellyncymer (O)
Sheila Harman, Corner Cottage, Shropshire (O)
Garth Parker, Soar, Nantglyn (O)
William Gordon, Tanfforddwen, Nantglyn (O)
David Roberts, Hazelwood, Saron (O)
P. Tondeliev, 4, Fron Goed, Nantglyn (O)
P. Devenport, Nantgwyn, Nantglyn (O)
Ms. E. Toft, 5, Maes Lliwen, Nantglyn (O)
M. Williams, Isgaerwen, Pentrellyncymer, Corwen (O)
R G Bilby, Tyn Llidiart, Nantglyn (O)
Pat Woodward - Ty'n y Pistyll Bach (o)
Susan Winter - Cefn y Maes Waen (o)
Alan Parry-Gupta - Glyn Hyfryd, Nantglyn (o)
John Hopkinson - Fron Dirion, Llanfihangel (o)
Peter & Jane Ramsey, Bryn Salem, Nantglyn (O)
Valerie Kerr Wilson, Mysevin, Nantglyn (O)
Sue & John Griffith, Bryn Robin, Groes, (O)
Ian Gardner, Gwynant, Waen Nantglyn (O)
Chris Edwards, Gorffwysfa, Waen, Nantglyn (O)
Richard & Janette Welch, Plas Nantglyn, Nantglyn (O)
Jill Tyrer, Cefn Maen Isaf, Saron (O)
J. Yorke, Pen y Bryn Farm, Waen, Nantglyn (O)
A. Wilcox-Jones, Pen y Banc, Nantglyn (O)
David Cullen, Isgoed, Soar, Nantglyn (O)
Giles Harborne, Cefn Y Maes, Nantglyn (O)
Hugh Yorke, Pen Y Bryn Farm, Waen, Nantglyn (O)
Jane Yorke, Pen Y Bryn Farm, Waen, Nantglyn (O)
Dona Jones, Rhiwiau, Nantglyn (O)
Jo Brett, Segrwyd Mill Cottage, Nantglyn (O)
Richard Parry - Hafodwen, Nantglyn (o)
Ann Williams - Hafodwen, Nantglyn
Elizabeth Cornwall, Gwaen y Mywion, Nantglyn (O)
Christopher Cornwall, Gwaen y Mywion, Nantglyn (O)

Summary of planning based representations in objection:

Additional landscape and visual impact

Proposals involve increases in hub height and swept area (1.24 acres per turbine to 1.62 acres – 32%) / negative landscape and views from many areas / continuous encroachment of turbines should be resisted / turbines would be considerably larger than those at Tir Mostyn and the differential would appear discordant / 10 metre increase would have significant adverse visual effect / already massive cumulative impacts on Nantglyn village / precedent is being set for increasingly larger turbines / development would ruin the view from Moel Fammau to Snowdon – one of the reasons used to defeat the Gorsedd Bran application / trees in area are being felled and reducing the screening effects, exposing views of turbines / concern over addition of warning lights on turbines impacting on night sky / enough is enough

Noise impact

Absence of information and explanation as to whether there will be no change to noise levels / questions over how practically the site can be operated on a two noise level criteria, what allowance has been made for cumulative noise from Clocaenog Wind Farm, and what calculations have been undertaken and what safeguards are proposed to protect residents from amplitude modulation / concerns over additional noise / tree removal seems to be make a difference in audibility of turbine noise and suggests noise data is out of date

Effects on attractiveness of Brenig area and tourism
Development would only worsen dominance of turbines which affects visitors appreciation of the area / quality of life of residents is being eroded

Ecological impact
Increase in impact on birds and bats

Environmental impacts understated
Turbine foundations would remain long after machines are removed

Impact on historic assets
Documents accept a number of ancient monuments are affected

Other matters

Misleading / confusing information in submitted documents
Non technical Summary underplays impacts, offering opinion with little reference to research and facts / no information on the size of new turbine housings and the size of blades / output of turbine appears to be lower than previous consented scheme / reliance on original Environmental Statement is inappropriate /

Majority of the community consulted by the developer will not have appreciated the scale of the proposal and its implications / people have not been told openly of the size differences in turbines

Original application was only passed by 2 votes, this is a new application, so in view of the inconsistencies and inaccuracies committee should refuse to approve any changes/ if original turbines were 110m high, would the vote have been different

Council seem powerless to stop turbine development

Government policy appears to be changing and discouraging onshore wind

Council should be wary of toe in the door tactics where developers get consent for one thing then change

Application does not provide details of what follows- e.g. overhead line connection

This should be treated as a new application not a minor change to an approved one

Conflict with Local Development Plan policies – VOE9

Council should pay close attention to the combined impact of this and the Pant y Maen application

In support

Representations received from:

Jones Brothers Civil Engineering UK, Ty Glyn, Ruthin (S)

Summary of planning based representations in support:

- Employment benefits in the area for local companies
- Proposals seek to harness the greatest amount of renewable energy with limited alterations to significant impacts of the consented scheme
- Scheme will help to meet legally binding renewable energy targets

EXPIRY DATE OF APPLICATION:

REASONS FOR DELAY IN DECISION (where applicable):

- additional information required from applicant
- re-consultations / further publicity necessary on amended plans and / or additional information
- awaiting consideration by Committee

1. THE PROPOSAL:

1.1 Summary of proposals

1.1.1 This full planning application seeks permission to construct and operate a 16 turbine wind farm along with associated transformers, access tracks, switchgear and metering buildings, anemometry towers and infrastructure, as revisions to a previously approved scheme for 16 turbines, granted permission in 2009. The typical turbine specification in the submitted documents show a maximum turbine tip height of 110m, and indicative hub heights of 65m and rotor diameters of 90m. The description of the development on the forms refers to this as a revised scheme partially implemented under planning permission 25/2007/0565.

1.1.2 The site is referred to as the Brenig Wind Farm, and is located to the north east of Llyn Brenig.

1.1.3 The original planning consent referred to was granted by Denbighshire County Council in April 2009 under application code no. 25/2007/0565. The application was described as follows:

“Construction and operation of a wind farm comprising of sixteen wind turbines with a maximum tip height not exceeding 100m, along with transformers, access tracks, on-site switchgear and metering building, two anemometry towers and associated construction and operational infrastructure”

Land East of Llyn Brenig, Nantglyn

1.1.4 Planning permission 25/2007/0565 was subject to a number of conditions, including a requirement that the development was commenced within 5 years of the date of the consent, i.e. within 5 years of April 6th, 2009. The developers submitted a number of ‘Approval of Condition’ applications in relation to the 2009 permission in the course of 2013-4 and undertook works in connection with the vehicular access to the site in early 2014 in order to implement the permission. The Council has confirmed that works to the access constitute a commencement of works and that the permission has been implemented.

1.1.5 The application documents indicate that the current proposal is to increase the tip height for all 16 consented turbines from 100 metres to 110 metres, due to an increase in hub height and blade length, and they confirm that the number and location of the turbines will not change. They also advise that the proposal could result in an additional output of 8 MW, thereby increasing the overall indicative maximum output capacity of the windfarm to 48 MW; and that there could be a potential increase in foundation dimensions and crane hardstanding area to accommodate the larger turbine components.

1.1.6 The ‘associated works’ again include site tracks, turbine foundations, 2 permanent anemometry masts, a transformer, underground electricity cables, a switchgear and metering building, borrow pits, and a temporary construction compound. The location of these associated works is similar to what was approved in 2009.

1.1.7 For information, the application is submitted by Natural Power Consultants Ltd, acting as agents for the applicants, Brenig Wind Limited. Brenig Wind Ltd were the applicants on the original application in 2007.

1.1.8 The current scheme involves Environmental Impact Assessment development requiring submission of an Environmental Statement. The application is therefore accompanied by a volume of supporting documents and plans, all of which are available for inspection on the Council's website. The documents submitted include:

- A non-technical summary of the Environmental Statement
- A Design and access Statement
- The full Environmental Statement containing chapters and appendices dealing with:
 - o The policy context
 - o Site Selection and design
 - o Community Consultation
 - o Project details
 - o Detailed Environmental Assessments including:
 - *Landscape and visual effects (A Landscape and Visual Impact Assessment)
 - *Residential visual amenity assessment
 - *Hydrology assessment
 - *Ecological and ornithological assessment
 - *Noise assessment
 - *Shadow Flicker assessment
 - *Cultural Heritage assessment
 - *Traffic and Transport assessment

1.1.9 The supporting documents, including the Design and Access Statement provide detailed commentary on the background to the application and set out the case for the grant of permission. They include reference to the details of the proposals and conclusions on impacts; and an outline of what are considered to be relevant national, Welsh Government and local planning policy and guidance applicable to the development.

1.2 Description of site and surroundings

1.2.1 The site is on and around the hilltop of Tir Mostyn, and immediately to the west of the existing 25 wind turbine development in this location, which stretches to Foel Goch to the south. The northern tip of Llyn Brenig lies under 1km to the west.

1.2.2 The nearest village to the site is Nantglyn, some 3km to the north. Denbigh is 11km to the north east, and Ruthin 13km to the east. There are private dwellings to the immediate north of the site, and others beyond the Tir Mostyn / Foel Goch wind farm to the east and south.

1.2.3 The site stretches over approximately 2.5km from north to south, and 2km from west to east. It includes parcels of land which have previously been afforested, and open upland grazing land around Tir Mostyn itself, down to the B4501. Tir Mostyn is shown at an elevation of 492m above sea level. Ground levels where the turbines are proposed are at an elevation between 460m and 491m AOD.

1.2.4 The application site is located partly within the Community Council areas of Nantglyn and Llanrhaeadr Y.C. The County boundary with Conwy is some 3km to the west.

1.2.5 There is a public footpath running across the site from the Tir Mostyn windfarm in the north east corner of the site, to the Boncyn Arian Tumulus next to Llyn Brenig. The Clwydian Way footpath runs around part of the southern boundary of the site, to the south east of turbine 16.

1.3 Relevant planning constraints/considerations

- 1.3.1 The site is in open countryside outside any development boundaries approved in the Local Development Plan.
- 1.3.2 It lies within the boundary of the Clocaenog Forest Strategic Search Area identified in Technical Advice Note 8 (TAN 8), i.e. the area deemed suitable for large scale wind turbine development.
- 1.3.3 The site is not within an area with a statutory landscape designation. The nearest boundary of the Clwydian Range AONB is some 14km to the east. The nearest boundary of the Snowdonia National Park is some 14km to the west. These areas are shown on one of the plans at the front of the report.
- 1.3.4 In terms of non-statutory designations, the site lies within the Denbigh Moors Landscape of Special Historic Interest, and to the west of, but outside, the Vale of Clwyd Landscape of Outstanding Historic Interest. There are Sites of Special Scientific Interest to the west and south of the site boundary
- 1.3.5 As noted above, part of the Clwydian Way circular long distance trail runs along the southern boundary of the application site, and a public footpath runs across the site from the north east corner to the tumulus next to Llyn Brenig.

1.4 Relevant planning history

- 1.4.1 The main permission of relevance to the application is the 2009 consent for a 16 turbine development on the site, referred to in other parts of the report. The significance of this consent is dealt with in later sections of the report.
- 1.4.2 The 25 turbine development operating on adjoining land at Tir Mostyn / Foel Goch was granted permission by Welsh Assembly Government in December 2002, following the 'call in' of the application for determination by the National Assembly. These are 75m high turbines with a 52m rotor diameter.
- 1.4.3 The Development Consent Order permitting the development of the 32 turbine Clocaenog Forest windfarm on land stretching from east of the Tir Mostyn Turbines south to the Cerrigydrudion – Ruthin Road west of Clawddnewydd was confirmed in September 2014. The consented dimensions are for up to 145m high turbines.
- 1.4.4 There is a single turbine operating at Hafodty du immediately to the east of the Tir Mostyn turbines. This was granted permission in July 2014. This is an 81m high turbine with a rotor diameter of 52m.
- 1.4.5 Planning permission was refused by Denbighshire County Council in 2008 for a 13 turbine development at Gorsedd Bran, some 2km to the north west of the application site. This refusal was the subject of an appeal to the Planning Inspectorate, which was dismissed, and there followed a series of further legal challenges. The site is the subject of a current undetermined planning application with Denbighshire for an 8 turbine windfarm, under application code number 25/2015/0321, and is described therein as Pant y Maen.

1.5 Developments/changes since the original submission

- 1.5.1 None

1.6 Other relevant background information

- 1.6.1 The application has generated a high volume of correspondence with a number of representations in support and in objection. The report attempts to set out the main

land use planning comments so Members have an idea of the basis of opinions expressed of relevance to the determination of the application.

- 1.6.2 The application documents refer to consultations undertaken by the applicants / agents on the application, including a public exhibition of the proposals in March 2015 in the Church House Hall in Nantglyn.

2. DETAILS OF PLANNING HISTORY:

2.1 Application 25/2007/065

“Construction and operation of a wind farm comprising of sixteen wind turbines with a maximum tip height not exceeding 100m, along with transformers, access tracks, on-site switchgear and metering building, two anemometry towers and associated construction and operational infrastructure”

Land East of Llyn Brenig Nantglyn

Granted 06/04/2009

The developers received approval of a number of Approval of Condition applications in 2013 and early 2014 in relation to this permission and have undertaken works in connection with the access in order to commence the development

2.2 Application 25/1999/0710 (Tir Mostyn / Foel Goch Windfarm)

Development of a 25 turbine windfarm and associated development (47m tower, 52m rotor diameter).

Granted by Welsh Assembly Government, 19/12/2002.

2.3 Application (Clocaenog Forest Windfarm)

Operation of windfarm with a gross electrical output capacity of up to 96MW, consisting of up to 32 turbines, on site substation and associated works. Maximum tip height 145m.

2.4 Application 25/2013/ (Hafod ty du turbine)

Erection of turbine, 55m hub, 52m rotor diameter.

Granted 30/04/2014

2.5 Application 25/007/0642 (Gorsedd Bran windfarm)

Construction of 13 turbines (up to 125m height), with associated developments.

Refused 02/04/2008 – landscape / visual impact; noise; potential for flooding from tree felling; inadequate predetermination surveys to assess impacts on protected species.

2.6 Application 25/2015/0321 (Pant y Maen windfarm)

Construction and operation of 8 turbines (typical height 102m, rotor diameter

84m), with associated works.

Undetermined at time of preparation of this report.

3. RELEVANT POLICIES AND GUIDANCE:

3.1 The main planning policies and guidance are considered to be: Denbighshire Local Development Plan (adopted 4th June 2013)

Policy PSE5 – Rural economy

Policy VOE1 – Key areas of importance

Policy VOE2 – Area of Outstanding Natural Beauty and Area of Outstanding Beauty

Policy VOE5 – Conservation of natural resources

Policy VOE 6 – Water management

Policy VOE9 – On-shore wind energy

Policy ASA 1 – New transport infrastructure

3.2 Supplementary Planning Guidance

Archaeology

Nature Conservation and Species Protection

3.3 Government Policy / Guidance

UK level

Energy Acts 2008 – 2013

Climate Change Act 2008

Renewable Energy Strategy 2009

Renewable Energy Roadmap 2013

The Carbon Plan 2011, updated 2013 Utilities Act 2000 and the Renewables Obligation

Welsh Government level

One Wales: One Planet 2009

Climate Change Strategy in Wales 2010

Welsh Energy Policy Statement 2010

Planning specific documents

Planning Policy Wales Edition 7, 2014

Planning Implications of Renewable and Low Carbon Energy (Practice Guidance 2011)

Technical Advice Notes

TAN 5 Nature Conservation and Planning (2009)

TAN 6 Planning for Sustainable Rural Communities (2010)

TAN 8 Planning for Renewable Energy (2005)

TAN 11 Noise (1997)

TAN 15 Development and Flood Risk (2010)

TAN 18 Transport

3.4 Other material considerations

Denbighshire Landscape Strategy (2003) / LANDMAP

Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development, Final Report May 2013

ESTU R 97 and 'A good practice guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise' (IOAGPG)

4. MAIN PLANNING CONSIDERATIONS:

In terms of general guidance on matters relevant to the consideration of a planning application, Planning Policy Wales Edition 7, July 2014 (PPW) confirms the requirement that planning applications 'should be determined in accordance with the approved or adopted development plan for the area, unless material considerations indicate otherwise' (Section 3.1.2). PPW advises that material considerations must be relevant to the regulation of the development and use of land in the public interest, and fairly and reasonably relate to the development concerned., and that these can include the number,

size, layout, design and appearance of buildings, the means of access, landscaping, service availability and the impact on the neighbourhood and on the environment (Sections 3.1.3 and 3.1.4).

The following paragraphs in Section 4 of the report therefore refer to the policies of the Denbighshire Local Development Plan, and to the material planning considerations which are considered to be of relevance to the proposal.

4.1 The main land use planning issues in relation to the application are considered to be:

- 4.1.1 Principle
- 4.1.2 Planning history -relevance of the existing planning consent
- 4.1.3 Landscape and visual impact
- 4.1.4 Noise
- 4.1.5 Shadow flicker
- 4.1.6 Residential amenity
- 4.1.7 Ecology
- 4.1.8 Highways
- 4.1.9 Aviation and Radar
- 4.1.10 Heritage interests
- 4.1.11 Tourism
- 4.1.12 Hydrology / water supply/ flooding / surface water

4.2 In relation to the main planning considerations:

4.2.1 Principle

Overarching policy

There is significant legislation and policy set out at international, European Union and UK Government level supporting the principle of renewable energy development. Planning Policy Wales (PPW) reaffirms UK and Welsh Government energy policy and recognises that wind energy generation remains the most commercially viable form of renewable energy in Wales. The principle that wind energy development is an acceptable means of securing generation of renewable energy is therefore well established.

Welsh Government's Technical Advice Note 8 (TAN 8) and the general strategies in Planning Policy Wales 7 (PPW) Section 12.8 provide technical advice and guidance on renewable energy projects. TAN 8 introduced the principle of spatial planning for the delivery of energy policy and identified 7 Strategic Search Areas (SSAs) where large scale onshore wind developments should be concentrated. Developments such as the one at Brenig fall within the 'Strategic' scale of development in PPW 7, being over the 25MW threshold.

Factually, the site is within Clocaenog Forest Strategic Search Area (SSA 'A') where national planning policy supports the principle of large scale wind energy development.

Denbighshire Local Development Plan (LDP) Policies

LDP Policy VOE 9 supports the principle of on shore wind turbine development subject to assessment of environmental and sustainability impacts. The Brenig Wind Farm proposal would fall within the Strategic / Large Scale development category in the policy, involving a development with a generating capacity over 25MW. The policy states Strategic / Large Scale developments will be supported within the Clocaenog Strategic Search Area. The localised impacts are reviewed in the following sections of the report.

In summary, there is a significant body of international, European Union, UK and Welsh Government legislation, policy and guidance offering clear support for the development of renewable energy technology. At Welsh Government level, TAN 8 and related Ministerial statements set out policy in support of the development of major wind power proposals on a locational basis, in the guise of Strategic Search

Areas, where large scale wind farms (25MW+) are to be developed. The Clocaenog Forest is one of the Strategic Search Areas. The site lies within the TAN 8 'broadbrush' SSA. The principle of developing a large scale windfarm on the application site has been established previously by the grant of planning permission in 2009, and the 'revised' proposals are in line with the principles set out in these key strategic documents. National and Welsh Government policy is not up for challenge in relation to individual planning applications.

4.2.2 Planning history -relevance of the existing planning consent

The existence of a commenced planning permission for a 16 turbine development on the site is a significant material planning consideration relevant to the weighing up of the application now in front of the Council. The developers can legitimately proceed to implement the 2009 permission for the erection of the sixteen 100m high turbines in the same location as now proposed for the 110m high machines. In the context of the existing permission, Officers would therefore strongly recommend against opposing the development in principle, as this has clearly been established through the 2009 consent.

It is suggested that the land use planning matters pertinent to the determination of the application are whether there have been any significant changes in the policies of the Local Development Plan, national or Welsh Government policy, or whether there are other material considerations which may justify reaching a different conclusion from the one the Council made in granting the planning permission in 2009.

The review of relevant Planning Policy and guidance in section 4.2.1 above suggests there are no fundamental changes at national, Welsh Government and local level which now go against the principle of wind turbine development in this location.

Realistically, from viewing the material relating to the application, the key matters to address here are whether there are additional impacts likely to arise from the proposed revisions to the turbine dimensions, compared to those arising from the original scheme for 100m high turbines. These are reviewed in the detailed impact sections of the report which follow.

4.2.3 Landscape and visual impact

- Local Development Plan policies

Policies relevant to the visual and landscape impact associated with wind energy development are VOE 9 and VOE 10. These policies require due consideration of the localised effects of development, including cumulative impacts on the surrounding area and community, which involves assessment of landscape and visual impact.

With regards to sub-local authority scale developments, VOE 9 specifically requires consideration of the potential impact on the setting of an Area of Outstanding Natural Beauty (AONB) and other designated sites, and the text of the policy indicates that outside the SSA, sub local authority scale developments will be considered where they fall outside designated areas or the setting of the designated areas; and that turbine height will be limited to protect landscape impact.

Policy VOE 1 applies to Key Areas of Importance and requires development proposals to maintain and, wherever possible, enhance these areas for their characteristics, local distinctiveness, and value to local communities in Denbighshire, including local areas designated or identified because of their natural landscape or biodiversity value. Key Areas of Importance are stated in the policy as statutory designated sites for nature conservation, areas designated or identified because of their natural landscape or biodiversity value; sites of built heritage; and Historic Landscape, Parks and Gardens.

Policy VOE 2 relates to development proposals within or affecting the Area of Outstanding Natural Beauty and the Area of Outstanding Beauty. It states that development that would cause unacceptable harm to the character and appearance of the landscape and the reasons for designation will not be permitted. The text to the policy indicates that consideration will be given to both the impact of development

within these designations, and the impact of development on their setting, and that important views to and from the AONB and AOB will be protected.

- Welsh Government policy and guidance

Planning Policy Wales and TAN 8 provide the strategic policy framework for assessing wind energy development and contain some specific guidance on the detailed consideration of landscape and visual impact to assist local planning authorities determine planning applications. TAN8 Annex D states that within SSAs, the implicit objective is to accept landscape change i.e. a significant change in landscape character from wind turbine development. However, it accepts that given the increasing number of consented wind turbine developments within and on the periphery of the SSA, it is imperative that cumulative effects are fully considered when planning applications are assessed.

- The Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development

This Study was published in May 2013 and aims to inform the development of strategic Supplementary Planning Guidance and to assist Denbighshire and Conwy Councils in assessing the landscape and visual effects of onshore wind energy development for development control purposes. It reviews and analyses information in the LANDMAP layers, which have been a useful reference for assessment purposes previously.

Within the Sensitivity and Capacity Study, Section 4 provides an evaluation of landscape units and their sensitivity for wind energy developments. The Brenig Windfarm site is located on the eastern side of landscape unit D10 Moorland Plateau (Denbigh Moors). The key characteristics of D10 are noted as typically vast in scale, predominantly rolling upland moorland plateau, and cultural heritage interest. The summary of sensitivity to wind energy developments is assessed as 'high', although the text to this section refers to high landscape value being reflected in the western half of the area being designated as the Hiraethog SLA, and there are expansive views to and from important landscapes, it is noted that the northern extent of the area lies within the TAN 8 SSA 'A' and is likely to have a lower sensitivity.

Section 6 of the Landscape Sensitivity and Capacity Assessment sets out guidance for wind energy development within defined strategy areas, in which Landscape unit D10 is included in Strategy Area 9 –Denbigh Moors. This section confirms the area has an overall 'high' sensitivity to wind energy development, but recognises that the eastern part of this landscape lies within TAN 8 SSA 'A' and is of lower sensitivity due to the presence of existing wind energy developments. . It reviews designated features within the strategy area and then provides a section headed Landscape Strategy and guidance for siting wind turbines, within which it states two landscape objectives apply – stating ' In areas within TAN 8 SSA 'A' the objective is **landscape change**. This is because it is recognised that there is a presumption in favour of wind energy development in TAN 8 areas'. For all other parts of this area the objective is **landscape protection**. The bold text is as included in the Assessment document.

- Assessment

Factually, the site is in the order of 15km from the respective boundaries of the Snowdonia National Park, and the Clwydian Range and Dee Valley AONB. The location of these designations are shown on a plan at the front of this report, along with the site plan, representations of the turbines from the Nantglyn direction and of the change in dimensions, which are taken from one of the wireframes in the Environmental Statement.

The application is accompanied by a detailed Landscape and Visual Assessment. This recognises the statutory and non statutory designations, and provides appraisal of impacts. The conclusion in the Design and Access Statement states. . " Significant effects on landscape character and visual amenity during the operational phase of the project would be restricted to within the site boundary and areas immediately adjacent

to it, including locations surrounding Llyn Brenig and the eastern fringes of Denbigh Moor. However, the proposed development would not result in any change to the level of significance that would be caused by the consented scheme. The same is true for the potential impacts on visual amenity for nearby residential property.”

It is evident from the earlier sections of the report that there are contrasting representations in relation to the landscape and visual impact of the proposals.

In terms of individual representations:

Those individuals in objection have raised a range of concerns over the proposals in terms of the increases in hub height and swept area, the negative landscape and views from many areas, suggesting the continuous encroachment of turbines should be resisted, that turbines would be considerably larger than those at Tir Mostyn and the differential would appear discordant, that a 10 metre increase would have significant adverse visual effect, there is already massive cumulative impacts on Nantglyn village, a precedent is being set for increasingly larger turbines, development would ruin the view from Moel Famau to Snowdon – one of the reasons used to defeat the Gorsedd Bran application, that trees in the area are being felled and reducing the screening effects, exposing views of turbines, and that the addition of warning lights on turbines would impact on the night sky.

In terms of consultation responses:

Objections are raised on the landscape and visual impacts of the proposals by the Nantglyn and Llanrhaeadr YC Community Councils, Snowdonia National Park, and the AONB Committee. These emphasise a range of concerns over the increase in the height of the turbines, the swept area involved, increased cumulative impacts, and the setting and quality of the National Park and AONB. The summary of these comments is in the consultation responses section of the report

There are no objections from Denbigh Town Council, Natural Resources Wales, and the Council's Landscape Consultant. Natural Resources Wales conclude the changes to landscape and visual amenity of landscapes of National Parks, AONBs and sites on the Register of Landscapes of Historic Interest in Wales, judged against the consented and operational wind development in the area, would not result in significant effects, and do not object to the proposal. The Council's Landscape Consultant has assessed the issues and the relevance of the existing permission in terms of impact on the character of the surrounding landscape, the visual effects of the proposal within the locality and from more distant views, and considers that the *consented* windfarm would have a significant detrimental impact on the immediate area of moderate to high scenic value, but the change in height however, would be difficult to discern. He has also reviewed the implications of cumulative landscape impacts in relation to existing and consented energy development in the area, and whilst acknowledging the local area is already influenced by wind energy development and would be further influenced by consented development, concludes that the large scale and open landscape is able to accommodate large scale windfarm development without unacceptable damage to landscape character and quality. Overall, he broadly agrees with the conclusions of what is considered a thorough Landscape and Visual Assessment, and on the basis of his assessment does not consider that the proposed extension of blade tip heights to the consented Brenig windfarm would cause undue landscape and visual impacts and therefore recommends approval of the application.

- Conclusions

There are inevitably differing opinions on the issue of landscape and visual impact, and clearly strongly held views on this matter. Officers have assessed the information in the application, along with the volume of representations on the issue, and the contents of the Conwy and Denbighshire Landscape Sensitivity and Capacity Assessment for Wind Energy Development. The characteristics of the area have been observed from site inspection.

Having regard to the basis of the responses, Officers consider the conclusions of Natural Resources Wales and the Council's Landscape Consultant are of some significance in the formulation of the recommendation. It is suggested these should be accorded due weight in determination of the proposals, given the particular context set by:

- the consented scheme for the construction of 16 no. 100m high turbines on the site, which has commenced and can be completed, which it has been accepted previously by the County Council will have significant landscape and visual impacts
- the fact the site is within Welsh Government's TAN 8 Strategic Search Area for large scale windfarms where there is implicit acceptance of significant landscape change
- the existing turbine development in the area, including the Tir Mostyn / Foel Goch site, which has established the first large scale wind farm in the Strategic Search Area, with turbines of 75m height
- the existence of the consent for the nearby Clocaenog Forest windfarm, involving turbines of up to 145m in height.
- The actual differences in impacts likely from the proposed changes in dimensions of the turbines, which are not considered likely to be easy to discern, in particular when viewed at distance

It is not contested in any of the consultation responses that the windfarm here will have adverse landscape and visual impacts, but what is in question is whether the increase in height of the turbines from 100m to 110m, with associated increase in rotor diameter would have such a significant effect to now justify refusal of permission. In Officers' opinion, on the basis of the consultation responses, and the considerations above, it is not concluded that the extent of changes are of such magnitude to merit a negative recommendation.

4.2.4 Noise

LDP Policy VOE 9 requires due consideration of impacts of wind energy development on the surrounding area and community

TAN 11 relates to the assessment of noise in relation to development proposals. The general guidance is that local planning authorities should ensure noise-generating development does not cause an unacceptable degree of disturbance, but in some instances it may be acceptable to allow noise-generating activities near to noise sensitive receptors.

ETSU-R-97 is the industry standard for the Assessment and Rating of Noise from Wind Farms, and is cited in TAN 8 as the relevant guidance on good practice. In May 2013, the Institute of Acoustics published 'A good practice guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise' (IOAGPG) which Officers consider is also material.

In terms of representations on the matter, there are objections from Nantglyn and Llanrhaeadr YC Community Councils on the basis of cumulative noise. Private individuals express concerns over the absence of information and explanation as to whether there will be no change to noise levels, questions over how practically the site can be operated on a two noise level criteria, what allowance has been made for cumulative noise from Clocaenog Wind Farm, and what calculations have been undertaken and what safeguards are proposed to protect residents from amplitude modulation. It is also suggested tree removal makes a difference in the audibility of turbine noise and that noise data is out of date.

The Environmental Statement contains a detailed and technical noise assessment. The conclusion in the Non Technical Summary states that 'predicted turbine levels and background noise levels indicate that for all receptors neighbouring the proposed development, wind turbine noise will meet the Day- time hours and Night-time hours

noise criteria specified in ETSU-R-97. Cumulative impacts meet ETSU-R-97 criteria. Noise from construction activities is seen to be of negligible significance'.

As the proposals relate to wind farm development, the Pollution Control Officer has deferred comment on the noise issues to the Council's external noise consultant. The Consultant's detailed review is referred to in the consultation responses section of the report. This is a thorough appraisal of the issues relevant to assessment of noise and provides a clear recommendation that there is no reason to refuse permission on grounds of noise provided that attached conditions are imposed. Ultimately, with every respect to the basis of local concerns, this is a situation where the considered conclusion of noise consultants is that enforceable planning conditions can be imposed to take account of cumulative noise, with suitable arrangements for future monitoring, consistent with advice in ETSU-R-97. The suggested conditions are similar to those imposed on the 2009 permission for the now commenced Brenig Wind Farm development, with appropriate updates / revisions from the Noise Consultant. Bearing in mind the existence of the current consent, and on the basis of the Noise Consultant's review and conclusions, it is not considered there is any reasonable 'technical' basis for opposing the development on noise grounds.

4.2.5 Shadow flicker

LDP Policy VOE 9 requires due consideration of impacts of wind energy development on the surrounding area and community.

There is technical guidance on shadow flicker issues in National Policy Statement for Renewable Energy Infrastructure (EN-3) and the Practice Guidance for Renewable and low Carbon Energy. These suggest that assessment should only be carried out where turbines are proposed within 10 rotor diameters of an existing occupied building, and that only properties within 130 degrees either side of north relative to the turbines can be affected in the UK. The likelihood of shadow flicker occurring and the duration of such an effect depends on a range of factors, including the time of the year, the size of the turbine, the direction and speed of the wind and the relative cloud cover.

The proposed rotor diameter in this instance is 90m, therefore the potential impacts should only be experienced up to 900m from the turbine locations, and only then within 130 degrees either side of north. The documents refer to one property within 840m of turbine 5 (Ty Newydd), which could experience shadow flicker, but it is concluded the impacts of the revised scheme would involve no increase on the maximum duration from the consented scheme, and that the development would not cause a material reduction to residential amenity.

In noting the above contents of the submission, Officers remain of the view that as shadow flicker analysis is not an exact science, in the event that permission is granted, and as a precautionary measure, it would be advisable to include a standard planning condition requiring mitigation measures to be applied should the incidence of shadow flicker be experienced by any nearby unrelated properties. On this basis, it is reasonable to conclude that the proposal would not conflict with policy VOE 9 with respect to shadow flicker.

4.2.6 Residential amenity

LDP Policy VOE 9 requires due consideration of impacts of wind energy development on the surrounding area and community, which can include effects on residential amenity.

Matters of noise impact and shadow flicker are residential amenity considerations, and are dealt with under separate sections of the report. The other main consideration is the acceptability of turbine development in terms of effects on residential visual amenity, which involves assessment of the potential impact on the living conditions within and immediately around a dwelling, i.e. an individual's enjoyment of a property.

The application documents contain a residential visual amenity assessment at the 12 properties within a 2km distance from the turbines. This concludes the development would form a prominent feature from 6 of these properties, and that from two, the wind farm would form a main view at distances of 1.16km and 1.49km (Hafod Caradoc and Hafod Wen). The submission states however, that at all properties, the view of the consented scheme and the proposed scheme would be similar in terms of the number and proportion of each turbine that would be visible, and hence there would be no change in the significance of effects on visual amenity as a result in the increase of blade tip height to 110m.

Officers' conclusion on this matter remains as set out in the original report to Committee on the 2007 application. At the distances involved, it is considered unlikely that the impact of turbines of the increased dimensions now proposed on residential amenity could now be concluded to be so significant that refusal of permission would be justified. Whilst caution is necessary in comparing situations, it is of relevance that the Wern Ddu appeal inspector concluded the impact of 2 turbines of 90m height within 500 metres of a private dwelling would not be unacceptably overbearing or intrusive.

4.2.7 Ecology

The general requirements to consider the impact of development on biodiversity interests are set out in PPW Chapter 5, TAN5, and LDP policies VOE 5 and VOE 9.

VOE 5 requires due assessment of potential impacts on protected species or designated sites of nature conservation, including mitigation proposals, and suggests that permission should not be granted where proposals are likely to cause significant harm to such interests. This reflects policy and guidance in Planning Policy Wales (Section 5.2). Specific to wind turbine development is policy VOE 9 which requires specific assessment / explanation of impact on biodiversity and mitigation proposals.

There are representations expressing concern over the potential effects on wildlife interests, specifically an increase in impact on birds and bats.

The Environmental Statement refers to a range of surveys undertaken and provides interpretation of these, detailed ecological and ornithological assessments and proposals for post construction monitoring and mitigation provisions, should this be necessary.

Consultee responses raise no objections in relation to ecological impacts. Natural Resources Wales basic position is to recommend imposition of conditions included on the original permission, with the addition of conditions controlling peat loss, and a Surveillance strategy and Curtailment plan in relation to bats. The Council's Biodiversity Officer agrees with the assessment of impacts in the ecology section of the Environmental Statement, and suggests the main significant effects of increased height are on bats. She is satisfied at the proposed approach for operational monitoring and mitigation, and supports proposals for conditions relating to monitoring and mitigation.

Having due regard to the above, there do not appear to be any adverse ecological impacts anticipated which would give rise to concerns over the grant of permission. Officers conclude therefore that the scheme would not have an unacceptable impact on nature conservation, and is not in conflict with Welsh Government Policy and LDP policies VOE 5 or VOE 9.

4.2.8 Highways

LDP Policy VOE 9 requires due consideration of the effect of wind energy development on the surrounding area and community, which would include transport impacts.

There are no representations raising specific concerns over the highway impacts of the proposals.

The Highways Officer has commented on the contents of the Draft Traffic Management Plan and would require additional information in relation to standard HGV deliveries. It would in any event be necessary to ensure a condition is imposed to oblige submission of a suitable Construction Method Statement requiring details of the site compound, traffic management, etc. in the event of permission being granted.

On this basis, Officers conclude there would no unacceptable additional highways impacts from the proposal.

4.2.9 Aviation and Radar

The impact on aviation and radar equipment is material to the determination of wind turbine applications.

No objections have been received from any of the air safeguarding / aviation authorities in relation to the proposals. The MoD have advised that due to the proximity of the turbines to existing wind farms, they would be content for suitable lighting to be fitted to specified turbines.

In the absence of objections, it is considered reasonable to conclude that proposed turbines would not have any adverse effects on aviation and radar interests in the area.

4.2.10 Heritage interests

Policy VOE 1 of the Local Development Plan seeks to protect designated areas from development which would adversely affect them . This includes statutory designated sites for nature conservation, local areas designated or identified because of their natural landscape or biodiversity value, sites of built heritage, historic landscape, parks and gardens. VOE1 reflects the principles in Planning Policy Wales Section 6 which stresses the role of local planning authorities in securing the conservation of the historic environment, whilst ensuring it accommodates and responds to present day needs.

There are limited individual representations expressing concerns over the impacts on the archaeological and historic environment, albeit there is a comment noting a number of ancient monuments are affected. CADW have made detailed comments on the proximity to designated monuments which form a relict prehistoric ritual landscape and a number of other monuments. In noting reservations over the scope and validity of the archaeological assessment undertaken in relation to the previous, consented scheme, CADW agree with the conclusions of the Environmental Statement that the impact of the proposed 110m turbines on the settings of the designated monuments referred to will not be any more adverse than that of the consented scheme, and they do not therefore

object to the impact of the proposed increase in turbine height on these designated monuments. This is a similar conclusion to that of the Clwyd Powys Archaeological Trust and the County Archaeologist, who suggest mitigation is carried out as a condition of any permission.

On the basis of the comments from CADW and CPAT, it is not considered that the proposals would give rise to impacts in excess of those which would arise from the completion of the consented scheme, and hence there would be no reasonable heritage impact grounds to oppose the application.

4.2.11 Tourism

LDP Policy VOE 9 requires due consideration of impacts of wind energy development on the surrounding area and community, which would include potential effects on the local economy.

There are individual concerns suggesting development would only worsen dominance of turbines which affects visitors appreciation of the area.

Whilst acknowledging points raised in relation to impacts on tourism enterprises, there is limited evidence to support a refusal of planning permission for permission for this particular application as it is for larger turbines on an already consented windfarm site, itself within a Welsh Government 'designated' windfarm area. It is respectfully suggested that it would be difficult to argue in an appeal situation that the changes to turbine dimensions on an already consented development would make such a difference to the attractiveness of the area for tourists. What research appears to have been undertaken into the impact of wind farm development tends to highlight both positive and negative findings in areas where wind farms have been established.

In conclusion, Officers consider that given there is an already consented scheme for 16 turbines on the site, and in the absence of any tangible evidence to suggest that the grant of permission would have a direct detrimental impact on the local tourism economy, there would be no reasonable planning justification to refuse the application on this basis.

4.2.12 Hydrology / Water Supply/ Flooding/ surface water

LDP Policy VOE 9 requires due consideration of impacts of wind energy development on the surrounding area and community, which would include potential effects on hydrology, water supply, flooding and surface water drainage.

There are limited comments received in relation to these matters following consultation. Natural Resources Wales require adherence to previous conditions and mitigation proposals, and request additional conditions be added to any consent.

The application provides detailed assessment of impacts on the hydrological, hydrogeological and geological environments. It is stated that the site layout configuration will not change from that currently consented, and that there is a comprehensive suite of mitigation and best practice measures incorporated into the design, including extensive buffer areas. Special measures would be put in place to deal with impacts on areas of deeper peat deposits. The analysis concludes that in relation to the hydrological regime, with the implementation of the proposed mitigation measures, the significance of construction effects on identified receptors is considered to be of negligible / minor significance, and the overall significance of effects on the hydrological, hydrogeological and geological environment are not significant in terms of the EIA Assessment Regulations.

Officers' conclusions on the basis of the response from NRW are that the proposals do not appear to suggest unacceptable effects will arise in relation to the local water environment, provided suitable conditions are imposed to ensure proposed mitigation measures are implemented in conjunction with the development

Other matters

Use of Section 106 Obligation

The 2009 permission for the wind farm at the Brenig Site was the subject of a Section 106 Obligation, through which the Council secured the submission and implementation of benefits including a Community Benefit fund, a fund for the conservation of red squirrels, and a historic landscape contribution (including provision of interpretation facilities at the Brenig Centre). The applicants have been approached on a 'without prejudice' basis to the determination of the application in relation to securing the same benefits in relation to the current submission, and have confirmed they are prepared to enter into a similar agreement.

5. SUMMARY AND CONCLUSIONS:

- 5.1 The application relates to a site within the Clocaenog Forest Strategic Search area where Denbighshire granted planning permission in 2009 for a 16 turbine wind farm, involving turbines with a tip height of 100m. This development has commenced and can be completed in accordance with the 2009 permission.
- 5.2 The current full planning application seeks permission for 16 turbines in the same locations as approved in 2009, with revisions to the dimensions of the turbines which involve increasing the tip heights to 110m.
- 5.3 The report sets out the considerations Officers believe are relevant to the determination of this application. It refers to the existence of the 2009 consent being a significant material consideration, and suggests the key issues to address are the 'additional' impacts arising from the increased dimensions of the turbines, and whether these are of such significance as to now make the development unacceptable. It is not considered there have been any significant planning policy changes since the grant of the 2009 permission which challenge the acceptability of the principle of windfarm development in this location.
- 5.4 There are a range of representations expressing concerns over the proposals, including from local Community Councils and private individuals. Having regard to the basis of consultation responses, Officers suggest landscape / visual impact and noise considerations are central to the determination of the application in this instance.
- 5.5 The Officer recommendation is ultimately that permission be granted, subject to the imposition of the majority of conditions attached to the 2009 consent, supplemented by conditions requested by technical consultees and the completion of a Section 106 Obligation to cover the same matters as included on the 2009 agreement. The report acknowledges the substance of objections, but in respect of the key issues, concurs with the conclusions of the Council's noise and landscape consultants that the 'additional' impacts over and above those which may arise from full implementation of the 2009 permission are not of such significance that these justify a refusal.

The Officer recommendation is consequently for the grant of permission, subject to appropriate conditions and completion of a legal agreement acceptable to the Council's Legal Officer, to secure a Community Benefit fund, a fund for the conservation of red squirrels, and a historic

landscape contribution.

The planning permission would not be released until the completion of the agreement; and on failure to complete the agreement within 12 months of the date of this Committee, the application would be reported back to the Committee for determination against the policies and guidance relevant at that time.

The contents of the Environmental Impact Assessment has been taken into account in preparing this report and recommendation.

RECOMMENDATION: - GRANT subject to the following conditions:-

The Conditions are:

- 1 The development hereby permitted shall begin before the expiration of 5 years from the date of this permission.
- 2 Unless specified by other conditions attached to this permission, the development hereby permitted shall be carried out strictly in accordance with the following plans and documents:
 - (i) Design and access statement June 2015 received 18 June 2015
 - (ii) Environmental Statement, Volume 1 of 4: Written Statement received 18 June 2015
 - (iii) Environmental Statement, Volume 2 of 4: Supporting Figures and Appendices received 18 June 2015
 - (iv) Environmental Statement, Volume 3 of 4: Visualisations (Viewpoints A-W) received 18 June 2015
 - (v) Environmental Statement, Volume 4 of 4: Non-Technical Summary received 18 June 2015
- 3 The planning permission shall be for a period of 25 years from the date of the first generation of electricity to the grid from the development. Written confirmation of the date of the first generation of electricity to the grid from the development shall be provided to the Planning Authority no later than 1 calendar month after the event.
- 4 The location of the turbines and ancillary structures such as anemometer masts, 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.
- 5 No work shall be permitted to commence on the switchgear and metering building until the written approval of the local planning authority has been obtained to its precise location, the external wall and roof materials.
- 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 110m from original ground level.
- 7 All the blades shall rotate in the same direction.

- 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.
- 9 No part of the development shall display any name, logo, sign, advertisement or means of illumination without the prior written approval of the Local Planning Authority.
- 10 All electricity and control cables between the turbines and the switch room 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.

11 CONSTRUCTION METHOD STATEMENT

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 in writing to and approved by the Local Planning Authority. The scheme shall include provisions relating to:

Construction and reinstatement of the temporary site compound
Construction and reinstatement of all internal tracks including measures to reinstate planting on approach tracks
Soil stripping management

The investigation of any disturbance to peat within the footprints of the tracks and structures, to inform micro siting to minimise peat loss

Surface and foul water drainage
Pollution Prevention and Control plan, in particular to demonstrate steps to prevent impacts on streams which provide private water supplies, and proposals for mitigating and remedying any degradation in the quality of water supplies.
Traffic Management including HGV routes
Traffic signing along public roads
Recording the existing state of the site

Development shall be carried out in compliance with the approved Construction Method Statement, unless otherwise approved in writing by the Local Planning Authority.

- 12 No works on the construction of the turbine bases or delivery of wind turbine components or wind turbine erection plant shall be permitted to commence until there have been submitted to and approved in writing by the Local Planning Authority:
 - a scheme for the recording of existing road conditions by the developer,
 - arrangements for the repair and reinstatement of public highways.
- 13 Construction work on the site shall be confined to the hours of 0700-1900 Mondays to Fridays and 0700-1300 hours on Saturdays with no working on Sundays or national public holidays unless otherwise agreed in writing with the Local Planning Authority.
- 14 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.
- 15 The permanent running widths of internal access tracks shall be no greater than 5m wide (10m on bends) unless agreed in writing by the Local Planning Authority.

SURFACE WATER DRAINAGE

- 16 No works of construction, laying out of access tracks, or work on the construction compound shall be commenced until a scheme for the disposal of foul and surface waters has been approved by the Local Planning Authority. The scheme shall be implemented in accordance with the approved details.
- 17 Nothing other than uncontaminated excavated natural materials shall be tipped on the site.
- 18 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 should be at least equivalent to the capacity of the tank plus 10%. If there is multiple tankage, the compound should 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 should be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets should be detailed to discharge downwards into the bund.
- 19 None of the trees within the application site shall be felled until the written approval of the Local Planning Authority has been obtained to the timing and methodology of the clearance operations, and to specific details of the means of addressing/attenuating surface water run off from the tree clearance, related construction operations, together with associated mitigation and monitoring arrangements, including steps to remedy any degradation in the quality of water supplies to private properties in the locality.
- 20 No works of construction, laying out of access tracks, works on the construction compound, or tree felling shall be permitted to commence until the written approval of the Local Planning Authority has been obtained to a preliminary site assessment, which shall include the following:
- Identification of all water features both surface and groundwater (ponds, springs, ditches, culverts etc.) within a 300 metres radius of the site boundary.
 - Use made of any of these water features. This should include the construction details (e.g. depth) of wells and boreholes and details of the lithology into which they are installed;
 - An indication of the flow regime in the spring or surface water feature, for example whether or not the water feature flows throughout the year or dries up during summer months;
 - Accessibility to the spring/well;
 - This information should be identified on a suitably scaled map (i.e. 1:10,000), tabulated and submitted to the Environment Agency. The developer should photograph each of the identified water features during the survey.

Based on the results of the survey the applicant must assess the likely impacts from the development on both quantity and quality of the surface water and groundwater. This should take into consideration both the preferred methods of construction and the assumed hydrogeology in the vicinity of the development.

DECOMMISSIONING

- 21 Not later 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 for the consideration of the Local Planning Authority. The scheme approved in writing by the Local Planning Authority shall be carried out and completed within 12 months from the date that the planning permission hereby granted expires.

- 22 If any wind turbine generator(s) hereby permitted ceases to operate for a continuous period of 6 months then, unless otherwise agreed by the Local Planning Authority, a scheme for the decommissioning and removal of the wind turbine generator(s) and any other ancillary equipment and structures relating solely to that generator(s), shall be submitted to and agreed in writing by the Planning Authority within 6 months of the end of the cessation period. The scheme shall include details for the restoration of the site. The scheme shall be implemented within 6 months of the date of its agreement by the Local Planning Authority.

HIGHWAYS

- 23 No works of construction, laying out of access tracks, work on the construction compound or tree felling shall be permitted to commence until the written approval of the local planning authority has been obtained to the restoration/treatment of Public Footpath No. 67 during and after the construction phase of the development, including the timing of works on the footpath.
- 24 Full details of the proposed site access shall be submitted to and approved in writing by the Local Planning Authority before any work commences on site.
- 25 Facilities shall be provided and retained within the site for the loading, unloading, parking and turning of construction vehicles in accordance with a scheme to be agreed with the Local Planning Authority, and which shall be completed before work on the turbines is commenced. These facilities shall be retained for the whole duration of the construction period.
- 26 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 agreed with the Local Planning Authority, and which shall be completed prior to the commissioning of the wind farm.

BORROW PITS

- 27 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 as approved.

ARCHAEOLOGY

- 28 No works of construction, laying out of access tracks, work on the construction compound or tree felling shall take place until the applicant has secured the implementation of a programme of archaeological mitigation and such other mitigation as has been submitted by the applicant and approved in writing by the Local Planning Authority, to include for a watching brief and an appropriate buffer zone marking of identified archaeological sites.
- 29 Where development approaches to within 50 metres of any archaeological site, that site shall be protected and marked by a robust temporary barrier and the barrier should remain in place for the duration of the construction phase so that no accidental damage occurs. The placement of the barriers should not directly impact upon any unscheduled site or scheduled ancient monument areas and must be placed outside any scheduled monument boundary.

AIR SAFEGUARDING

- 30 The developer shall provide written confirmation of the following details to the Ministry of Defence and the Civil Aviation Authority within 3 months of the date of this permission and the commencement of development shall not occur until this confirmation has been given:
- i) Proposed date of commencement of the development

- ii) The maximum extension height of any construction equipment.
- 31 Within 14 days of the commissioning of the final turbine, the Company shall provide written confirmation of the following details 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.
 - iv) The lighting details of the site, to include details of the IR lighting to be fitted to the turbines indicated on the map provided by the MOD with their email dated 12th October 2015.

TELECOMMUNICATIONS INTERFERENCE

- 32 None of the turbines shall be erected until a baseline television reception study in the area has been undertaken by a qualified television engineer at the developer's expense, and has been 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 wind farm/turbine, 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 wind farm/turbine on the basis of the baseline reception study, such impairment shall be mitigated within 6 months of this decision according to the mitigation scheme outlined, unless otherwise agreed by the Local Planning Authority.

SHADOW FLICKER

- 33 None of the turbines shall be erected until the written approval of the Local Planning Authority has been obtained to the details of a scheme to address the incidence of shadow flicker at Ty Newydd; such scheme to include details of photocells or other measures to control, re orientate, or shut down particular turbines. Unless agreed in writing by the Authority, 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 scheme shall be implemented as approved.

ECOLOGY

- 34 No works of construction, laying out of access tracks, or works on the construction compound shall commence until the written approval of the Local Planning Authority has been obtained to a scheme for habitat management and enhancement for the protection of the Mynydd Hiraethog SSSI, during and after the lifetime of the windfarm, to include for a mechanism to establish a Steering Group/Committee to review the plan, and details of how the agreed measures are to be implemented, including timing. All measures shall be implemented in accordance with the approved details.
- 35 Prior to the commencement of the operational phase of the proposal 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 content of the strategy shall include the following.

- a) Aims and objectives of surveillance.
- b) Identification of adequate baseline conditions prior to the start of development.
- c) Appropriate criteria and triggers that inform the circumstances when curtailment will be required;
- d) Methods of data gathering and analysis;
- e) Location of monitoring;
- f) Timing and duration of monitoring;
- g) Responsible persons and lines of communications.
- h) Review, dissemination and where appropriate, publication of results and outcomes.

36. A report describing the results of surveillance undertaken shall be submitted to the local planning authority at intervals identified in the strategy. This report 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:

- a) The circumstances if and when operations will be subject to curtailment;
- b) The times of the day when curtailment will restrict operations;
- c) The times of the year when curtailment will restrict operations;
- d) The weather conditions (temperature, wind speed and precipitation) when curtailment will restrict operations
- e) Technical specifications of equipment to ensure suitability for curtailment purposes;
- f) Mechanisms that will be undertaken to evidence and audit implementation of curtailment plans,

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

NOISE

37. The rating level of noise immissions from the combined effects of the wind turbines hereby permitted (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.

At Ty Newydd and Garreg Lwyd:

Standardised Wind Speed m/s	4	5	6	7	8	9	10
Individual Limit dB	43	43	43	43	43	43	43

At all other properties:

Standardised Wind Speed m/s	4	5	6	7	8	9	10
Individual Limit dB	35	35	35	35	37	39	42

38. A) Prior to the first export date, the wind farm operator shall submit to the local authority specifications for the type and mode of operation of the turbines to be used and this shall be approved in writing by the Local Planning Authority. 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 all in accordance with IEC61400. The specifications shall also set out the running modes in which each of the turbines shall be operated for each wind speed and direction.

B) Within 21 days from receipt of a written request of the Local 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 approved by the Local Planning Authority to assess the level 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 Local Planning Authority shall set out at least the date, time and location that the complaint relates to. Within 14 days of receipt 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 these conditions, 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 should 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 immissions 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 rating level of noise immissions.
- 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 immissions 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 immissions 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 Authority with the independent consultant's assessment of the rating level of noise immissions.

G) Where a further assessment of the rating level of noise immissions 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.

I) Turbines shall be run in the same noise mode at all times irrespective of wind direction or time of day.

The reason(s) for the conditions(s) is(are):

1. In order to comply with the provisions of Section 91 of the Town and Country Planning Act 1990.
2. For the avoidance of doubt.
3. For the avoidance of doubt and in order that the Local Planning Authority retains control over the longer term uses of the land.
4. For the avoidance of doubt and to allow the Local Planning Authority to retain control over the development.
5. For the avoidance of doubt and in the interests of visual amenity.
6. For the avoidance of doubt and in the interest of visual amenity.
7. For the avoidance of doubt and in the interest of visual amenity.
8. For the avoidance of doubt and in the interest of visual amenity.
9. For the avoidance of doubt and in the interest of visual amenity.
10. In the interests of visual amenity.
11. To ensure proper controls over the matters referred to minimise the impact of the development.
12. In the interests of highway safety.
13. In the interests of amenity of occupiers of property in the locality.
14. To minimise the need for imported material and movement of HGV's on highways.
15. In the interests of visual amenity.
16. To prevent pollution of the water environment.
17. To prevent pollution of the water environment.
18. To prevent pollution of the water environment.
19. To ensure proper arrangements to limit surface water run off and to protect the quality of water supplies to private properties.
20. To protect controlled waters.
21. To ensure adequate arrangements are in place to reinstate the site.
22. To ensure adequate arrangements are in place to reinstate the site.
23. In the interests of safeguarding public rights of way.
24. In the interest of free and safe movement of traffic on the adjacent highway and to ensure the formation of a safe and satisfactory access.
25. To provide for the loading, unloading and parking of construction vehicles clear of the highway and to ensure that reversing by vehicles into or from the highway is rendered unnecessary in the interest of traffic safety.

26. To provide for loading, unloading and parking of service vehicles clear of the highway and to ensure that reversing by vehicles into or from the highway is rendered unnecessary in the interest of traffic safety.
27. To ensure proper arrangements for the capture of material for access tracks, and subsequent reinstatement of the land.
28. To ensure adequate arrangements for the archaeological recording and observations.
29. To ensure the protection of archaeological interests.
30. In the interests of air safety.
31. In the interests of air safety.
32. To ensure full investigation of television reception and arrangements to address any interference as a result of the development.
33. In the interests of the amenities of occupiers of Ty Newydd.
34. To ensure adequate steps are taken to protect and enhance the ecology of the area.
35. To ensure adequate steps are taken to protect and enhance the ecology of the area.
36. To ensure adequate steps are taken to protect and enhance the ecology of the area.
37. To minimise noise disturbance to residents in the vicinity of the wind farm.
38. To minimise noise disturbance to residents in the vicinity of the wind farm.

NOTES TO APPLICANT:

You are advised that this permission is subject to a Section 106 Obligation

Guidance Notes for Noise Condition

These notes are to be read with and form part of the noise condition No 34. They further explain the condition and specify the methods to be employed in the assessment of complaints about noise immissions 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 LA90,10-minute noise statistic should 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 should 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 Authority.
- (c) The LA90,10-minute measurements should 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 mean wind direction in metres from north in each successive 10-minutes 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 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 during the whole of the assessment of the level of noise immissions. The gauge shall record the amount of rainfall in each successive 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 Authority prior to the commencement of measurements.

Note 2

(a) The noise measurements should be made so as to provide not less than 20 valid data points as defined in Note 2 paragraph (b).

(b) Valid data points are those measured during the conditions set out in the assessment protocol approved by the Local 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 LA90, 10-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 to 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 immissions 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 LA90, 10-minute data have been determined as valid in accordance with Note 2, a tonal assessment 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"). 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. 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 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.

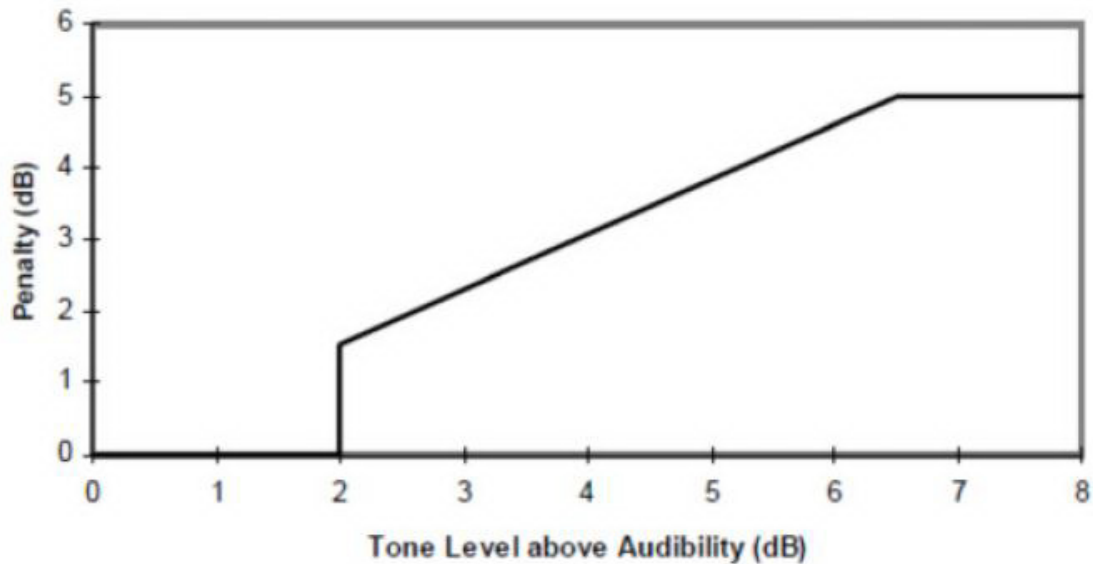
Note 4

(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 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 immission 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 this 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:
- iii. The rating level shall be calculated by adding the tonal penalty (if any is applied in accordance with Note 3) to the derived wind farm noise L1 at each integer wind speed.
- 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 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 conditions then the development fails to comply with the conditions.