

Kittie Powell

From: [REDACTED]
Sent: 06 March 2023 14:53
To: Kittie Powell
Subject: FW: RE: P2022/1048 Cefn Gwrgan Road - experimental turbine-12 month deployment

Importance: High

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Dear Kittie,

Please find attached an email from the ecologist Rotaheat has been working with. I have not sent these comments direct to Megan.

In addition to the ecologist's comments, I note that wind turbines with a swept area of 3.8m² (delivering approximately 1-2kW) do not require planning permission. Guidelines do exist for onshore turbines with a rated output exceeding 50kW (eg NatureScot's [Bats and onshore wind turbines - survey, assessment and mitigation | NatureScot](#)). Our turbine is expected to deliver a maximum of 7kW of thermal output and is generally considered a very small wind turbine.

Kind regards
Robert Thompson
[REDACTED]

From: glyn (i&g ecology) <glyn.igecol@gmail.com>
Sent: 03 March 2023 18:35
Cc: [REDACTED]
Subject: FW: RE: P2022/1048 Cefn Gwrgan Road - experimental turbine-12 month deployment
Importance: High

Hi Robert,

If you're happy with the below answers...just forward it on to
k.powell1@npt.gov.uk; and m.price4@npt.gov.uk

If you want to add anything you must qualify it as they'll ask what evidence you have, what paper or literature proves it etc?

Cheers for now,

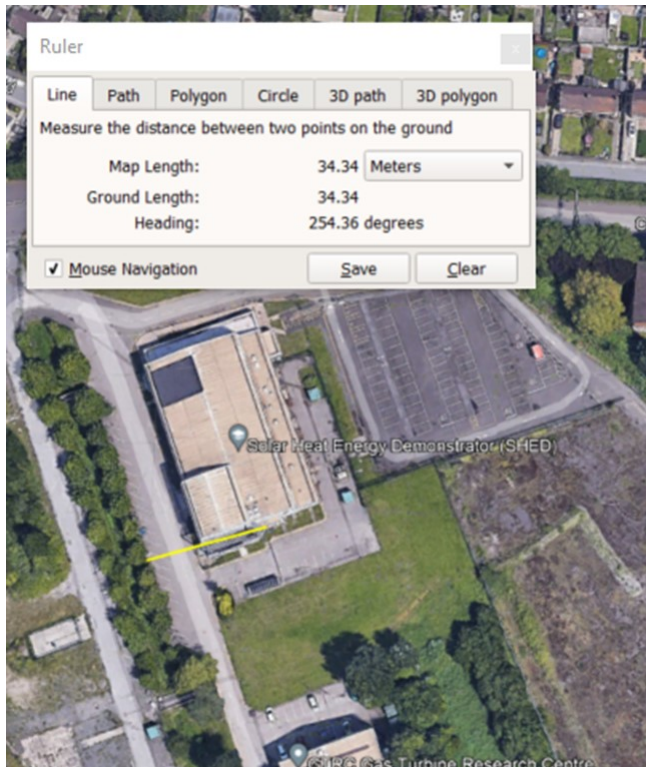
Glyn

The fact that there is a building within 50m of the turbine is not a major concern due to the limited potential of that building to support roosts. However there is a water course within 40m and this watercourse is bounded by trees/vegetation, and the site provides a suitable sheltered area for bats to forage. **The watercourse is dry during**

the summer and has a seasonal flow during the winter months leaving little or no winged “food” to feed upon, however we recognise that the tree line and corridor may offer commuting and foraging potential – this would be investigated with the walked transect and by placing passive recorders on site.

The hedge to the W of the development which contains the watercourse also provides a flightlines from the woodland to the S of the development. **Agreed...this is possible as features such as this are commonly used as such**

It is also around 120m from residential properties which have potential to support roosts and this looks like it could be an important foraging area if there are roosts nearby. **An LRC protected species data search was proposed previously highlighting any known roosts nearby, if any.**



We feel that activity surveys may be more suitable to record bat activity usage in the area proposed for the turbine combined with the use of passive recorders, as the passive recorders will not be able to tell what the bats are using the area for or if it is one bat foraging intensively or multiple bats commuting over. **Agreed, hence proposing the undertaking of walked transect/s – we want and welcome your input here and will accommodate any requests you have. We would also be approaching Aaron Davies and other colleagues/friends from Glamorgan Bat group to help out.**

We fully understand that this is an experimental turbine and the standard windfarm guidance may be more difficult to apply here – however it needs to be fully justified as to why the normal guidelines of a 50m buffer from vegetation isn’t required in this case. **The 50m buffer is not achievable on this site, the blades of this turbine are also “axial” meaning they only project from the pole by a minimum amount (1.5m radius) 3mx6m swept area (18m²) this is not the same technology as a “radial” turbine where the blades rotate and can project for many metres, 27m² in swept area.**

Robust justification needs to be provided as to why the guidance and recommended surveys are not considered appropriate for this scheme. **Can you highlight what guidance you refer to? Is it the SNH guidance for windfarms ...this doesn’t really cover a single axial experimental turbine, also we have no interest in working alone- share your knowledge with us and we’ll work to the guidelines you refer to.**

Appropriate mortality monitoring should be undertaken as part of this experimental scheme to inform its potential future use. A mechanism for remedial action in case of mortalities recorded through the monitoring should be detailed.

There will be weekly site visits to look for dead birds and bats and these will be recorded and reported to the LPA, NRW and the company responsible for the turbine.

Feathering of wind turbines has proven successful at reducing bat mortalities however this appears to be a vague suggestion in the document and not a defined course of action. Further detail and commitment is required on this.

Feathering is not possible on axial bladed turbines, bat activity rates has been shown to NOT predict bat mortality rates at turbine sites (Solick et al, 2020). Fiona Mathews (Sussex university) 2021 states that any EIA would be a poor predictor of bat mortality due to the fact that pipistrellus species can be actively attracted to a turbine. The heat generator (below the vertically orientated blades) on this experimental turbine *may* attract insects thus may attract foraging bats. On a night walked transect survey we'd propose thermal scans and a measure of the heat in that section of the 15m "monopole mast".

If bat mortality numbers are found to be significant then we propose that the turbine be "switched off" between 7pm and 7am.

Birds have also not been addressed at all other than the document provided with the original application which was last updated in 2010 – there has been a lot more research and guidance produced since that document – are any measures being taken to assess the potential impact on birds due to this turbine? **A bird survey of the site could be undertaken and as a pre-emptive measure the blades (although axial and NOT radial as in a standard turbine) could be painted black and white as a recent study has shown a reduction of 70% in mortality from doing so.**

May, R, Nygård, T, Falkdalen, U, Åström, J, Hamre, Ø, Stokke, BG. Paint it black: Efficacy of increased wind-turbine rotor blade visibility to reduce avian fatalities. *Ecol Evol.* 2020; 00: 1– 9. <https://doi.org/10.1002/ece3.6592>

A this is an experimental design we would expect the impact on bird to be part of the research of this turbine. We recommend that a scheme for monitoring is provided for birds and a mechanism for remedial action in case of mortalities recorded through the monitoring should be detailed. **We propose that bird mortality will be monitored weekly and any dead birds recorded and species noted. These data will then shared with the LPA/NRW/turbine company representative.**

We would also welcome any additional monitoring suggestions from the County Ecologist with local knowledge to ensure a robust and safe approach is taken. Staff at I&G have worked for EAW, CCW and NRW so we're extremely keen to "get it right" and to see if we can help a project that could contribute to minimising the impact of climate change and reducing our reliance upon fossil fuels.

We understand that the Turbine has time sensitive grant funding which is at risk if there are delays to starting and that the turbine will be fully decommissioned in March 2024 , hopefully having gained enough useful data.

If you have any queries or suggestions / additional surveys you'd like to see...just let us know.

Kind regards,

Glyn Lloyd-Jones **BSc (Hons), MSc, CBiol, MRSB**
Natural Resources Wales Bat Licence number S091520/1
Natural England Bat Licence No. 2016-22603-CLS-CLS
I&G Ecological Consulting Ltd,
Awelfryn, Llannon, Llanelli,
Carmarthenshire, SA14 6BY.
Tel: Glyn -07973 685423
lestyn: 07733 214829
Company Number **11290195**
We're on Sell 2 Wales!
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