

23 January 2023

Kittie Powell
Planning Officer – Development Management
Neath Port Talbot County Borough Council
Civic Centre,
Port Talbot
SA13 1PJ

Dear Kittie,

P2022/1048 Cefn Gwrgan Road Port Talbot

I am writing in response to your email sent to me, dated 19 January 2023 raising concerns regarding:

- the effect this experimental turbine may have on ecology (bats and birds), and
- a suitable noise impact assessment.

I note that no objection has been raised in respect of Highways and Drainage.

I am responding to the two areas of concern and proposing that planning permission be granted with four conditions.

Ecology

We attached to our application a document 'C.016_B - Birds and Wind Turbines'. This document cited a study indicating that wind turbines account for < 1 Bird Fatalities per 10,000 bird fatalities, significantly less than buildings vehicles and communication towers.

I have attached an additional document titled 'Visibility to bats', providing the turbine manufacturers views on the turbine's potential effect on bats. The document states

- Bats are most active in the months of April through to October, which coincides with the months when wind conditions are mildest and likely to result in the turbine frequently being idle.
- Under windier conditions, bats are more likely to hunt for insects in sheltered areas rather than open and windier open.
- Issues which cause a reduction in bat numbers, with commentary that indicates the turbine would be unlikely to contribute to a reduction in bat numbers
- The manufacturer suspects bats would 'see' the turbine as a semi-solid object and avoid the turbine in the same way that bats avoid trees.

The turbine manufacturer proposes in this additional document a test to help confirm their hypothesis that their small turbine would have no material impact on bats. We understand that this test has not been required to be conducted.

In the event that a bat or bird was suspected as having been injured by the turbine during the period of this temporary installation, we would be willing to assist the turbine manufacturer undertake their proposed test.

Noise Impact Assessment

The system proposed results from the integration of two existing technologies.

- The core wind turbine is based on the proven QR6 vertical axis wind turbine from VWT Power. This turbine has been evaluated as an electrically generating wind turbine to be very quiet. A noise report on the turbine has been produced by TUV.
- The turbine will drive Rotaheat's heat technology, a Rotaheater. The Rotaheater is exceptionally quiet, with just two moving parts, the bearings. The Rotaheater will be surrounded with thermal protection and enclosed within a shroud.

The technologies have not previously been integrated. The purpose of obtaining the planning permission is to help demonstrate and evaluate the integrated system.

As a first of a kind system, preparing a Noise Impact Assessment for the Cefn Gwrgan site will not be possible.

A proxy assessment could be considered based on an assessment previously conducted for the wind turbine. Most recently, Nottingham Trent University had a study conducted during 2022 as part of applying for planning permission to install a QR6 within their campus. For your reference, this report is attached (published on the Nottingham Council planning portal).

We believe that the assessment for Notting University provides a useful expectation for how our proposed system may impact the locale on the basis that the

- Rotaheater technology itself is unlikely to contribute any material noise incremental to the turbine itself, and
- The Nottingham Trent University does not have comparable ambient traffic as the nearby A4241 (Harbour Way) and the M4 and consequently will experience lower background noise.

The report's conclusion in section 6.1 states in part '(the turbine) ... would be unlikely to generate noise complaints as a result of their installation...'

I would like to reiterate that our planning application relates to a temporary structure for researching a technology which could assist reduce the climate impact associated with carbon emissions.

At the conclusion of the project, which must conclude by March 2024, we will would dismantle the entire system.

We would propose that planning permission be granted with the following conditions.

1. The system may operate 24 hours a day, subject to condition 2.
2. In the event that the Operator becomes aware of dead Bats or Birds within a 20m radius of the installation, then the system will be immediately be operated only during daylight hours until an ecology study is completed. Restoring the operating hours will be conditional on the council reviewing and agreeing to any recommendations derived from the study.
3. An “in the event of a complaint” noise condition be imposed such that in the event of a noise complaint which the NPT council considers to be justified, that the Operator must demonstrate through site noise measurements that the VAWT is operating in compliance with the VAWT manufacturer’s noise data and that the ETSU noise limits as defined in ETSU-R-97 are complied with at all nearby residential receptors.
4. The system must be dismantled by 31 March 2024, reflecting the short term requirement of the research project.

Yours sincerely,

Rotaheat Limited



Director

Enclosures:

- Visibility to bats
- Noise Impact Assessment of QR6 at Nottingham Trent University