

Mid Wales (Powys) Conjoined Public Inquiry Session 2(SSA B).

Application by RES UK & Ireland Limited dated 27 March 2009 for consent under Section 36 of the Electricity Act 1989 to construct and operate a 100MW wind turbine generating station in Powys, Mid Wales ('Llanbryn-mair')

Electricity Act 1989 (sections 36, 37, 62(3) and Schedule 8)

Town and County Planning Act 1990

Summary Proof of Evidence - Bats

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1 Qualifications, professional experience and scope of evidence

Qualifications

- 1.1 I am Peter Shepherd. I hold the degree of Bachelor of Science with Honours in Botany and the degree of Doctor of Philosophy from the University of Nottingham. I have been a full member of the Institute of Ecology and Environmental Management since 1992.

Professional experience

- 1.2 I have 22 years of professional experience in the voluntary and private sector. I am a partner in the ecology practice BSG Ecology LLP (BSG), which was formed in July 1997. BSG currently operates out of five offices and there are currently 31 ecologists and 6 administrative and support staff in the practice.
- 1.3 I have undertaken assessments in the form of statutory and non-statutory EIAs that have covered a wide range of development types including energy generation (wind farms, solar and energy from waste), road and rail infrastructure, housing development and urban regeneration projects. I have worked with a range of legally protected species and have been working with bats as a volunteer and as a professional for over 13 years. I also have applied for, and implemented, over 30 mitigation licences issued by Natural England (formerly Defra) for specific development projects throughout England. I was a member of the editorial board for the Bat Conservation Trust's Bat Survey Guidelines.

Background to inquiry

- 1.4 The environmental consultancy Ecology Matters Ltd formally scoped the survey work that would be required to inform the ecology chapter of the Environmental Statement in relation to bats. Survey work was undertaken in 2006 including; daytime inspections and assessment of bat habitats and roosting potential and night time activity surveys. The surveys employed walked transect and automated recording methodologies. Following further consultation with CCW a further automated detector survey was undertaken in August 2011.

1.5 I was commissioned by the appellant in December 2012 to provide advice on issues relating to bats arising at the site and evidence to this inquiry on this matter. I recommended an update of the bat survey baseline data was required and a suite of further bat survey that was undertaken in 2013. I visited the site on 20th June 2013 accessing all parts of the turbine field. I also visited and viewed the two bridge locations where additional work was being undertaken and viewed the ash tree and hedgerow that would be affected by access route works.

Scope of proof

1.6 My proof of evidence sets out:

- A review of the survey work undertaken between 2006 and 2013 and an evaluation of the methods employed as a basis for assessment;
- A review of relevant legislation and planning policy with regard to the legal protection of bats and how bats are considered within planning policy; and
- An assessment of the impacts of the proposed development on bats taking account of any proposed mitigation measures and where appropriate comments raised by consultees in relation to the proposed development.

2 Legislative and policy background in relation to bats

Legislation

2.1 There are two key pieces of legislation relating to the protection of bats:

- The Conservation of Habitats and Species Regulations 2010 (as amended); and
- Natural Environment and Rural Communities (NERC) Act 2006

2.2 The Conservation of Habitats and Species Regulations (the Regulations) provide strict protection to all species of bat in the UK. Licences can be provided to allow derogation from the protection afforded to bats. When considering any application for such licences in relation to development

projects the licensing authority is required to consider ‘the three tests’ set out in the Regulations which are: (a) is there an overriding need; (b) is there a favourable alternative, and (c) can the favourable conservation status of the species be maintained.

- 2.3 The NERC Act 2006 Section 42 requires the National Assembly for Wales to prepare and maintain a list of species and habitats of principal importance for the conservation of biodiversity in Wales. Eight species of bat are listed under Section 42 for Wales. including: 4 recorded at the site.

National Planning Policy

- 2.4 Section 6 of TAN 5 addresses development affecting protected and priority habitats and species and Section 6.3 specifically deals with the protection of European protected species. Section 6.5 provides advice on habitats and species of principal importance for biodiversity in Wales.
- 2.5 In relation to European protected species (including all species of bat) TAN 5 provides guidance on licensing and the application of the three tests. It also provides guidance on Regulation 9(5), which places a duty on the relevant competent authority that “*in exercising any of their functions, [it] must have regard to the requirements of the Habitats Directive*”.

The Development Plan

- 2.6 The Development Plan for Powys is the Unitary Development Plan (2001-2016) adopted 1st March 2010. Within this document there are various policies relating to the conservation of biodiversity and legally protected species. One policy ENV7 addresses directly the presence of legally protected species.

3 Identification of issues relating to bats

- 3.1 NRW (formerly CCW) responded to the environmental information in a letter dated 12th October 2012 in which NRW maintained an objection and commented that in relation to bats the SEI 2011 “*lacks clarity and information previously requested by CCW (now NRW) has still not been*

provided” (Paragraph 55). The information previously requested and listed in Annex 5 was:

- (a) The assessment has not identified or surveyed roosts in the vicinity of the site. This is important to identify potential risk areas with high bat densities;
- (b) Figure 8.2 was not identified in the SEI and should be provided to NRW;
- (c) Where trees are to be felled on off-site roads suitable mitigation measures should be included in planning conditions to avoid impacts on bats.

3.2 NRW also commented on the need for turbine blade tips to be at least 50 metres from woodland edge and watercourses as set out in the interim guidance TIN051. NRW also proposed that pre-commencement surveys should be undertaken to inform avoidance and mitigation measures for bats.

3.3 Further correspondence via e-mail and telephone has taken place since July but no formal response from NRW has been received at the time of preparing this proof of evidence. However, correspondence is on-going and it is hoped that a statement of common ground will be forthcoming.

3.4 PCC in their statement of case defer to the opinion and advice of NRW in relation to protected species.

3.5 In their Statement of case the Alliance refers to wildlife issues but does not provide any specific commentary on impacts on bats.

4 Bat Baseline and Assessment of Impacts

Desk Study and Field Survey

4.1 Local records of bats were requested in 2006 and again in 2013 when records for low-medium sensitivity species of bats were requested up to 5 km from the site and designated sites (for bats) and records of high sensitivity bats within 10 km were requested.

- 4.2 Bat survey work carried out within the site has involved a range of different techniques. These included roost assessments and emergence and re-entry survey and activity surveys using walked transects, driven transects and automated bat detectors between 2006 and 2013.

Survey results

- 4.3 No bat roosts were located within or close (200m) to the turbine locations. However, at least 5 species (the *Myotis* records could comprise more than 1 species) were recorded during the survey work: common pipistrelle, soprano pipistrelle, noctule, long-eared (most likely brown long-eared) and *Myotis* species.
- 4.4 In 2013 within the turbine field of the wind farm proposal, common pipistrelle was the most frequently recorded species with soprano pipistrelle the second most frequently recorded with both pipistrelle species comprising between 92 and 95% of all calls during automated and walked transect surveys respectively. The *Myotis* genus was the next most frequently recorded group of bats making up between 4% and 7% of all calls during walked transect and automated detector surveys respectively. The next most frequent species was noctule, which was recorded relatively infrequently. During walked transects 10 calls were recorded (comprising 1% of all calls). During the static detector survey 597 calls were recorded which made up 1.5% of all calls. Brown long-eared bat was recorded very infrequently with no calls during the walked transect and only 10 during the automated detector survey.
- 4.5 Of the species recorded, from the turbine field of the wind farm proposal only noctule is considered to be at high risk of (population) impact from wind turbine developments. The remaining species are considered to be at medium or low risk.
- 4.6 The survey work of the Offsite Highway Works access route included emergence and re-entry surveys of a single ash tree that will be lost and two bridges where widening works are required. Evidence of a roosting was only found at Gosen Bridge with two common pipistrelle bats recorded emerging in June. The Offsite Highway Work route was also surveyed using driven transects. A minimum of four species were recorded, with the most

frequently encountered species being soprano pipistrelle followed by common pipistrelle, which together made up 98% of all the bat calls recorded. *Myotis* bats were the next most frequently recorded species, followed by noctule.

- 4.7 Much of the site is a mosaic of open moorland, upland grassland, water courses and coniferous plantation. On the lower slopes and valleys there are water courses hedgerows and woodlands that provide links and connections within the landscape. These areas offer sheltered foraging habitats and commuting routes through the site, a considerable distance away from the proposed turbines.
- 4.8 I note that the positions of the turbines, the majority of which are in open locations, are not situated in areas where a higher level of bat activity was recorded during bat surveys.

Evaluation of survey methods and compliance with guidelines

- 4.9 The methods employed in the 2013 survey work follows the guidance in the BCT 2012 Bat Survey Guidelines with the exception that survey work was not continued into autumn (September/October) due to the timing of this inquiry. However, I consider the survey techniques and level of survey effort undertaken to be proportionate and appropriate considering the likely use of the site by bats and they provide a robust baseline for impact assessment.

Impacts on bats

- 4.10 There are direct as well as indirect impacts which may affect bat species in this location arising from the construction, operation and decommissioning phases of the proposed development. These could include loss of foraging habitat, temporary disturbance during construction, death or injury arising from collision or barotrauma, and interruption of commuting flight routes.

Loss of foraging habitat

- 4.11 The loss of foraging habitat arising from the construction of the turbines and associated infrastructure will be minimal and will not have an adverse effect on bats using the site. The loss of foraging habitat through the felling of forestry plantation, however, is likely to have a greater impact in particular

for pipistrelles, *Myotis* bats and brown long-eared bat that hunt along forestry rides and plantation boundaries. However I consider the effect of the loss of this foraging habitat will be limited. I also consider that the improvements that are likely to arise in terms of habitat quality and invertebrate diversity through the implementation of the Habitat Management Plan are likely to result in no net loss in foraging quality and may result in a long term small beneficial impact on foraging for bats.

Severance of commuting routes

- 4.1 There is no evidence of important commuting routes for bats within the site and as such I do not consider the wind farm will result in severance of flight paths or commuting routes.
- 4.2 Some minor loss of the hedgerows will occur during the Offsite Highways Works to allow access. However wherever possible gaps will be reinstated, additional hedgerow planting is proposed and other hedgerows will be protected. I consider therefore that there will not be severance of commuting routes arising from the proposed development.

Impacts on roosts

- 4.3 The only roost affected by the proposed development is a small common pipistrelle roost in the Gosen Bridge. Any bridge widening work may need to be subject to a licence from NRW depending upon how and when works are undertaken. I do not consider there is likely to be a permanent loss of roosting habitat associated with this bridge and that any impacts are of negligible significance.

Mortality

- 4.4 Despite the difficulties associated with assessing impacts on bats a judgement has to be made as to whether there is a likelihood of significant impacts arising on local bat populations. This should be based on the biology and behaviour of the species within a wind farm area and how they use the landscape to assess the potential for mortality. This information should then be considered in light of the comparative use of the site by each species, and the status of the species in the UK, to assess likely

impacts and whether these are likely to adversely affect the favourable conservation status of the species. In considering potential impacts on populations I have taken into account the current knowledge of the status of the population of each species and the potential effect the scheme may have on the conservation status of the species in terms of population viability and in terms of the natural range of the species.

- 4.5 The topography of the site and the local area means that in windier and cooler conditions bats are likely to use sheltered habitats within the valleys and lower altitude ground away from the turbine locations. The turbines, which will be situated on open and exposed areas of the site are unlikely to offer suitable foraging habitats for bats in these conditions and taking into account the position of habitat features and site topography, the risk to bats from turbine blades is likely to be low.

Common and Soprano pipistrelle

- 4.6 Common and soprano pipistrelles are the most frequently encountered species within the site with a significant proportion of activity recorded attributed to these species. Taking account of the relatively low level of use compared to lower altitudes, the frequent use of the site for only part of the season, the negative effect of relatively low winds on the abundance and distribution of prey species (particularly midges) and the proposed mitigation I consider the likelihood of mortality to be low although the incidental death of small numbers of these species cannot be discounted. Given this and the strong populations of both species in Mid-Wales I consider any low level of mortality is unlikely to adversely affect the conservation status of either species.

Noctule

- 4.7 The level of activity on site for noctule was very low. During the walked transects in 2013 only 8 passes by noctule were recorded and although a higher number of passes were recorded during the automated detector survey nearly half of the passes recorded came from one detector over two nights of prolonged foraging by what is likely to be a single bat.

- 4.8 Although noctule is at risk of collision the survey results indicate that there is a low level of activity across the site and activity appears to relate to small numbers of noctule bats commuting through the area. As such I consider there is unlikely to be a significant adverse effect on the local noctule population given that the risk of mortality is also low.

Myotis spp. and Brown long-eared bats.

- 4.9 In addition to the low sensitivity of these species the levels of activity on site were also low and I consider *Myotis* species and brown long-eared bats to be at very low risk of collision with turbines because of their flight and foraging behaviour and that there is very unlikely to be an adverse effect on these species from the operation of the wind farm.

Monitoring

- 4.10 Post-construction monitoring of bat activity and mortality has been discussed with NRW. However, guidance TIN051 indicates that monitoring should be required in most high risk situations and welcomed everywhere. I do not consider the proposed development to fall into the high risk category and consider the risk of collision to be very low.

In-combination effects

- 4.11 In terms of assessing an in-combination effect on bats I have considered other wind turbine developments up to 10km from the site, but with a particular emphasis on turbines within 7km.
- 4.12 Eleven wind farm developments (operational, approved or pending a planning decision) within 10km of the Llanbrynmair proposed wind farm are detailed in Table 8.1 of the Bat SEI. There are 7 sites up to 7km from the Llanbrynmair proposed wind farm with a collective total of 230 turbines of varying height and rotor blade length. There are four sites over 7km from Llanbrynmair proposed wind farm comprising 71 turbines.
- 4.13 Taking account of the data available and the location of the existing, approved and proposed wind farms I consider that whilst there is potential for a level of cumulative bat mortality it is unlikely that any such effect would be significant in terms of the conservation status of any species of bat.

5 Conclusion

- 5.1 While incidental death arising from collision cannot be entirely discounted for some species I consider the likely level of mortality to be negligible to low.
- 5.2 I therefore conclude that there is unlikely to be an adverse impact upon the Favourable Conservation Status of the populations of any of the bat species recorded using the site, either alone or in combination with other wind farm proposals.
- 5.3 Given the above I consider that the proposed development is acceptable in terms of the relevant legislation and planning policy.