



Greater horseshoe bat

BAT ACTIVITY SURVEYS FOR WIND ENERGY PROPOSALS – NATIONWIDE

During 2012 and 2013 our ecologists completed more than 20 Extended Phase 1 Habitat Surveys for proposed renewable energy projects throughout the UK, mostly wind turbine installations and ground-mounted solar arrays, many at existing farm holdings. Several sites featured habitats suitable for bats, including potential tree roosts, valuable feeding habitat, and hedgerows and other linear features which could be used by commuting and foraging bats.

In several cases it was considered that a proposed turbine was in a position which could pose a significant risk to bats using these features. Further bat surveys were recommended in order to assess the levels of activity on site and establish what mitigation would be required to minimise the risk of impacts to individuals or the local population.



Common pipistrelle (via flickr / bioblitzbristol)



Static bat detector for continuous monitoring

PROJECT

Bat activity surveys for wind energy proposals

DATE OF INSTRUCTION

2012 - 2013

LOCATION

Nationwide

CLIENT

Renewable energy developers

APPROACH

Initial acoustic surveys were carried out using the following methods:

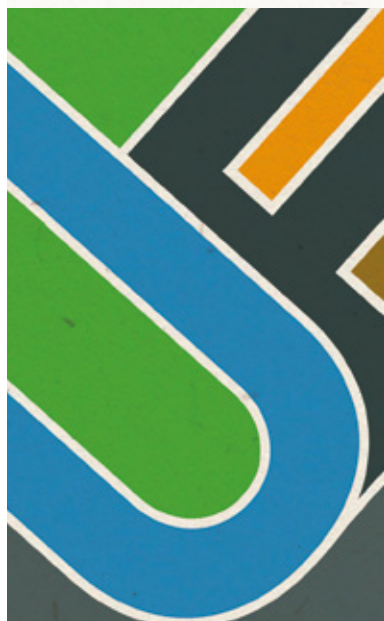
- Static detectors were placed at height close to the proposed turbine location(s) and set to record for at least five continuous nights
- Two ground-level transect surveys were undertaken using handheld detectors

The continuous monitoring data showed which species were passing through the site, and relative levels of activity throughout the night close to the proposed turbine location. Transect surveys provided further detail on the types of activity and location of any preferred foraging or roosting habitats, or commuting corridors.

OUTCOME

Results from the initial surveys were used to determine whether a full season of bat survey data was required to properly assess the risk of impacts to bats. In some cases, where bat activity was particularly low or focused on a certain feature, it was sufficient to adjust the position of the turbine to avoid the risk of impacts ('micro-siting'). Other outcomes have included:

- Powys, Wales: Initial transects showed high levels of activity by both soprano and common pipistrelles throughout the site but particularly along boundary woodlands and hedgerows. *Myotis* bats and serotines were also recorded. Analysis of the static monitoring data showed that noctules and lesser horseshoe bats were present but in fewer numbers. Recommendations were made for a full season of bat surveys to build up a complete picture of bat activity on the site prior to exploring possible mitigation measures.
- Norfolk, England: A full season of bat surveys found that common and soprano pipistrelle bats were foraging in moderate numbers within the site, but not were not at risk of turbine impacts. Noctule, serotine and *Myotis* bats were recorded in very low numbers, foraging outside the turbines' zone of influence. It was concluded that the development could proceed with a minimal risk of impacts to individual bats or their local conservation status.
- Lanarkshire, Scotland: Scoping surveys found relatively low levels of bat activity focused around tree lines at the site boundaries. A curtailment of operating conditions was agreed whereby the turbine would be switched off during the active season when the wind speed was suitable for bats to be flying, to avoid the possibility of impacts to bats occasionally foraging on site.



Unit 5 | Westergate Business Centre
Westergate Road | Brighton | BN2 4QN

Tel: +44 (0)1273 686 766

Email: enquiries@ueec.co.uk

www.ueec.co.uk



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