

ANNEX A

Document accessed 5 May 2026 to cite a report on the detrimental effect on bats of the proposed Lime Down Solar Park.

'Engineers studying bats near a solar plant in England realized the panels were tricking them into thinking they were water and changing their behavior' by Warren van de Sandt, The Pulse, 17 April 2026

A solar plant in England is affecting a species of bats.

As the renewable energy sector gains significant momentum, a few unexpected issues have emerged. When a team of engineers was constructing a solar plant in the UK, they found that **bats were being adversely affected by the panels** in a number of ways.

Studies have found that bats often **confuse wind farms for roosting sites** and are also attracted to the turbines, as insects tend to aggregate around the massive wind towers around the world.

Study reveals that bats in the UK are confusing solar panels for water

We have learnt how solar panel arrays in the desert have been creating thriving oases for some species, but this development across the pond has explained **how solar panels are confusing bats** in ways never expected.

Bats make their way through the world by echolocation.

When they send out an acoustic call towards a smooth surface, like a lake, the sound bounces off the body of water. Think of how a mirror reflects light, and you're halfway there. This study has detailed how bats in the United Kingdom are **confusing the smooth surfaces of solar panels** for bodies of water.

Researchers have found that solar panels act like "sensory traps" for bats as they mimic the echolocation signature of water.

The magical illusion leads to altered behavior in bats, like reduced activity as well as habitat avoidance. Solar panel arrays **have created a new ecological barrier** for bats that need to forage and commute.

Annex B

Document accessed 5 May 2026 to cite a report on the detrimental effect on bats of the proposed Lime Down Solar Park, and on the need for specific bat surveys to accompany any application for solar farms.

Do solar farms affect foraging & commuting bats?

Tinsley, E.; Froideveaux, J.S.P; Zsebők, S.; Szabadi, K.L.; and Jones, G. (2023). Renewable energies and biodiversity: Impact of ground-mounted solar photovoltaic sites on bat activity. *Journal of Applied Ecology* 60, 1752–1762.

A recent study published by a team led by the University of Bristol (Tinsley et al, 2023) claims to show a strong negative effect of solar farm developments on foraging and commuting bats. Our recent experience is that this has led to nature conservation stakeholders requesting additional survey to support solar planning applications.

This viewpoint article sets out our thoughts on the the extent to which the study changes the landscape in terms of baseline bat activity survey for solar farms, and the circumstances in which a change in survey methods or effort might be considered.

This paper is likely to be invoked in discussions with nature conservation stakeholders regarding bat survey effort on many future solar developments. We believe that there are a number of situations where applying its conclusions to justify increased survey effort are unlikely to be proportionate or justifiable, but conversely, it indicates that adverse effects on bats could be more common than previously recognised and that a circumspect, site-by-site approach is sensible.

Some factors which may indicate the need for survey and mitigation for bats on solar projects include:

Sites where the baseline habitat is long-established pasture under low-intensity management.

The presence of potential for significant roost sites, designated sites for bats or high-quality foraging habitat in the landscape.

Projects proposing battery storage or other significant noise-and light-producing infrastructure.

Early consultation with planning authority ecologists, together with thorough desk studies and habitat surveys as part of Preliminary Ecological Appraisal are likely to be essential.

Some typical mitigation features for bat-sensitive landscape design on solar farms include:

Landscape buffers around important foraging and commuting features such as hedgerows, woodland and waterbodies.

Incorporating habitat enhancements within retained areas, designed to enhance commuting connectivity and provide new foraging habitat.

Sensitive siting of infrastructure such as inverters, maintenance compounds and battery storage systems away from valuable bat foraging habitat and/or known roosts.