



# The Ecology Co-op

ENVIRONMENTAL CONSULTANTS

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12<sup>th</sup> February 2024

**Ref: Construction of extension at 15 Wyndham Road, Petworth GU28 0EB.**

To whom it may concern,

The Ecology Co-op undertook a bat scoping assessment at 15 Wyndham Road on the 12<sup>th</sup> of February 2024 at the request of Richard Harris. This assessment was undertaken further to a proposal to construct a two-storey extension to the rear of the property. The survey was undertaken in accordance with best practice guidance produced by the Bat Conservation Trust<sup>1</sup>.

The site is situated in an urban location within the town of Petworth. It comprises a residential property surrounded by hardstanding and amenity grassland with residential properties to the north, east, south and west. Agricultural fields bounded by hedgerows are present within the wider area. Given the nature and small scale of the proposals, this assessment has focussed upon localised site impacts only. The site location is shown in Figure 1 (Appendix 1).

The planned extension will extend across the eastern (rear) aspect of the house, which will result in the removal of wooden soffit boxes and some roof tiles. Plans for the site were not available at the time of survey.

The building inspection revealed that the dwelling is in good condition. No features were identified that could provide potential roosting features for bats. Table 1 below summarises the building assessed for bat roosting potential. Both the exterior and interior of the building were inspected as part of the survey. Photographs of the building are provided in Appendix 2.

**Table 1.** Summary of structures assessed for Potential Roost Features (PRFs)

Building section	Description of features	Assessment of suitability (Collins 2016)
Main house - exterior	Brick two-storey residential property with hipped concrete tile roof. No loose or missing tiles. No cracks or gaps in brick work or wooden fascia. No gaps in ridge tiles. No lifted lead flashing at chimney base.	Negligible bat roost suitability

<sup>1</sup> Collins, J.(ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4<sup>th</sup> edn). The Bat Conservation Trust, London.

Building section	Description of features	Assessment of suitability (Collins 2016)
Main house – interior	The roof void measures approximately 5m (l), 4m (w) and 2m (h). The void is used for storage and there were no recent signs of disturbance. Membrane is present throughout and a layer of rockwool insulates the floor area. There are no gaps present at the eaves or tears in the membrane. The crossbeams of the wooden supporting frame does not support any cracks or crevices. No evidence of bats was identified within the loft space.	Negligible bat roost suitability

Individual trees within nearby residential gardens and hedgerows along field boundaries in the wider area provide potential foraging and commuting routes for common bat species.

Overall, the suitability of the building to support roosting bats is rated as negligible, considering the condition of the building and its context within suitable foraging habitat for bats. As such, it is concluded that the proposed development will not impact on roosting bats and no further surveys are recommended in this instance.

To mitigate disturbance to foraging and commuting bats from artificial lighting, the proposed development should include an ‘ecologically sensitive lighting scheme’ in accordance with guidance produced by the Bat Conservation Trust (summarised in Appendix 3).

Additionally, the site can be enhanced for bats by incorporating the features below into the fabric of the building. Where bat access tiles are used, only a Type 1F bitumen lining must be used instead of modern breathable membranes such as Tyvec, which over time fray and entangle bats. The bat boxes and features should be installed under the instruction of a suitably licensed ecologist to ensure that the positioning is optimal, but generally, locations above 3.5m in the most southeasterly facing aspect of the building would be best.

These enhancement measures will help illustrate that the proposals are in adherence of Paragraphs 174 (d) and 180 (e) of the National Planning Policy Framework (NPPF) and should therefore be considered favourably within the planning process.



I write to confirm that following my assessment of the potential impacts that this development proposal might have upon roosting bats, no evidence of bat roosting was identified and there are no features present that might be considered suitable for roosting. The footprint of the proposed construction zone comprises only of hard standing and amenity grassland that have little ecological value and do not represent habitats that are likely to support protected species.

If you have any queries about the findings of this assessment, then please do not hesitate to contact me.

Kind regards,

A handwritten signature in black ink that reads "Lynn Spencer". The signature is written in a cursive style with a light grey background behind it.

**Lynn Spencer**

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## APPENDIX 1 – Figures



**Figure 1.** Aerial image showing the location of 15 Wyndham Road (indicated with a red outline). Site plan. Image produced courtesy of Google maps (map data ©2024 Google).

## APPENDIX 2 – Site Photographs



**Photograph 1.** The rear elevation of the property. Note the intact tiles, brickwork and sealed soffit boxes.



**Photograph 2.** Internal void space. No evidence of bats was identified.

## **APPENDIX 3 – Reducing Impacts of Artificial Light**

Bright external lighting can have a detrimental impact upon foraging and commuting bat flight paths, but more importantly can also cause bats to remain in their roosts for longer. Artificial lighting can also cause significant impacts to other nocturnal species, most notably moths and other nocturnal insects. It can also result in disruption of the circadian rhythms of birds, reducing their fitness.

Guidelines issued by the Bat Conservation Trust<sup>2</sup> should be referred to when designing the lighting scheme. Note that lighting designs in very sensitive areas should be created with consultation from an ecologist and using up-to-date bat activity data where possible. The guidance contains techniques that can be used on all sites, whether a small domestic project or larger mixed-use, commercial or infrastructure development. This includes the following measures:

### **Avoid lighting key habitats and features altogether**

There is no legal duty requiring any place to be lit. British Standards and other policy documents allow for deviation from their own guidance where there are significant ecological/environmental reasons for doing so. It is acknowledged that in certain situations lighting is critical in maintaining safety, such as some industrial sites with 24-hour operation; however, in the public realm, while lighting can increase the perception of safety and security, measurable benefits can be subjective. Consequently, lighting design should be flexible and be able to fully consider the presence of protected species.

### **Apply mitigation methods to reduce lighting to agreed limits in other sensitive locations – lighting design considerations**

Where bat habitats and features are considered to be of lower importance or sensitivity to illumination, the need to provide lighting may outweigh the needs of bats. Consequently, a balance between a reduced lighting level appropriate to the ecological importance of each feature and species, and the lighting objectives for that area will need to be achieved. The following are techniques which have been successfully used on projects and are often used in combination for best results:

- dark buffers, illuminance limits and zonation;
- sensitive site configuration, whereby the location, orientation and height of newly built structures and hard standing can have a considerable impact on light spill;
- consideration of the design of the light and fittings, whereby the spread of light is minimised ensuring that only the task area is lit. Flat cut-off lanterns or accessories should be used to shield or direct light to where it is required. Consideration should be given to the height of lighting columns. It should be noted that a lower mounting height is not always better. A lower mounting height can create more light-spill or require more columns. Column height should be carefully considered to balance task and mitigation measures. Consider no lighting solutions where possible such as white lining, good signage, and LED cats eyes. For example, light only high-risk stretches of roads, such as crossings and junctions, allowing headlights to provide any necessary illumination at other times;
- screening, whereby light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding;
- glazing treatments, whereby glazing should be restricted or redesigned wherever the ecologist and lighting professional determine there is a likely significant effect upon key bat habitat and features;
- creation of alternative valuable bat habitat on site, whereby additional or alternative bat flightpaths, commuting habitat or foraging habitat could result in appropriate compensation for any such habitat being lost to the development;
- dimming and part-night lighting. Depending on the pattern of bat activity across the key features

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<sup>2</sup> Bat Conservation Trust and Institute for Lighting Professionals (2018) Guidance note 8. Bats and Artificial Lighting. <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

identified on site it may be appropriate for an element of on-site lighting to be controlled either diurnally, seasonally or according to human activity. A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

### **Demonstrate compliance with illuminance limits and buffers**

- *Design and pre-planning phase*; it may be necessary to demonstrate that the proposed lighting will comply with any agreed light-limitation or screening measures set as a result of your ecologist's recommendations and evaluation. This is especially likely to be requested if planning permission is required.
- *Baseline and post-completion light monitoring surveys*; baseline, pre-development lighting surveys may be useful where existing on or off-site lighting is suspected to be acting on key habitats and features and so may prevent the agreed or modelled illuminance limits being achieved.
- *Post-construction/operational phase compliance-checking*; as a condition of planning, post-completion lighting surveys by a suitably qualified person should be undertaken and a report produced for the local planning authority to confirm compliance. Any form of non-compliance must be clearly reported, and remedial measures outlined. Ongoing monitoring may be necessary, especially for systems with automated lighting/dimming or physical screening solutions.

### **Lighting Fixture Specifications**

The Bat Conservation Trust recommends the following specifications for lighting on developments to prevent disturbance:

- lighting spectra: peak wavelength >550nm
- colour temperature: <2700K (warm)
- reduction in light intensity
- minimal UV emitted
- upward light ratio of 0% and good optical control.

### **Further reading:**

Buglife (2011) A review of the impact of artificial light on invertebrates.

Royal Commission on Environmental Pollution (2009) Artificial light in the environment. HMSO, London. Available at: <https://www.gov.uk/government/publications/artificial-light-in-the-environment>

Rich, C., Longcore, T., Eds. (2005) Ecological Consequences of Artificial Night Lighting. Island Press. ISBN 9781559631297.

CPRE (2014) Shedding Light: A survey of local authority approaches to lighting in England. Available at: <http://www.cpre.org.uk/resources/countryside/dark-skies/item/3608-shedding-light>

Planning Practice Guidance guidance (2014) When is light pollution relevant to planning? Available at: <https://www.gov.uk/guidance/light-pollution>

Institution of Lighting Professionals (2021) Guidance Notes for the Reduction of Obtrusive Light GN01:2011. Available at: <https://www.theilp.org.uk/resources/free-resources/>

Voigt, C.C., Azam, C., Dekker, J., Ferguson, J., Fritze, M., Gazaryan, S., Hölker, F., Jones, G., Leader, N., Lewanzik, D. and Limpens, H., 2018. *Guidelines for consideration of bats in lighting projects*. Unep/Eurobats. Available at:

