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Ref: Property demolition and construction of new dwelling at 43 Old Bath Road, Sonning.

To whom it may concern,

The Ecology Co-op undertook a bat scoping assessment at 43 Old Bath Road on the 3rd of January 2024 at the request of Arif Mohammed. This assessment was undertaken further to a proposal to demolish the current property including the detached garage, and construct a new dwelling. The survey was undertaken in accordance with best practice guidance produced by the Bat Conservation Trust¹.

The site is situated in the urban setting of Sonning, Reading; the central grid reference is SU 75434 74213. It comprises of a two storey detached house, with a detached garage and shed. Given the nature and small scale of the proposals, this report has focussed upon localised site impacts only. The site location is shown in Figure 1, Appendix 1.

The planned works will result in full demolition of the house and garage. The current drawings for the site are shown in Figure 2, Appendix 1. Proposed drawings are not currently available.

Table 1 below summarises the structures assessed for bat roosting potential. Both the exterior and interior of the buildings were inspected as part of the survey.

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

Building section	Description of features	Assessment of suitability (Collins 2016)
Main house – exterior	The house is a brick-built detached property, approximately 70 years old, with an intersecting pitched roof (Photograph 1). The northern and southern aspects are clad in clay hanging tiles, and an orangery-style ground-floor extension on the western aspect. The windows and doorframes are uPVC. On the front (northern) aspect all hanging and roof tiles are well appointed and in place (Photograph 2). All lead flashing is in place, and all brickwork is in good condition. On the western aspect, there is some lifted lead flashing on the roof of the orangery (Photograph 3). On the	Low bat roost suitability

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

Building section	Description of features	Assessment of suitability (Collins 2016)
	rear (southern) aspect all brickwork and soffits are in good condition. There is some raised lead flashing and the roof tiles have slipped in some places creating potential roosting features for use by bats (Photograph 4). On the eastern aspect all brickwork and soffits are in good condition.	
Main house – interior	The house contains a loft void that is accessed through two hatches. The timber frame is protected with roofing felt, all in good condition with no nicks or tears (Photograph 5). All timber is also in excellent condition. The ceiling joists are covered with fibreglass insulation. The water heater for the property is present, maintaining the temperature of the void. Mice droppings and old wasps' nests are present in the void (Photograph 6), but no signs of bats were found. The presence of mice droppings indicates there is access to the void that has potential to be used by bats.	Low bat roost suitability
Garage – exterior	The detached garage is brick-built with a pyramid hipped roof (Photograph 7). The roof field and hip tiles are all well-appointed with no gaps. The brickwork is in excellent condition.	Negligible bat roost suitability
Garage – interior	The interior of the garage does not contain a ceiling, so the rafters and roof lining are visible from the ground, and these are all in excellent condition with no cracks or tears (Photograph 8). The regular use of the garage by the homeowner greatly reduces the potential for bats to be roosting in here. The only visible access to the void is through the mechanical garage door.	Negligible bat roost suitability
Shed	The shed present in the garden is made of plastic. No potential roosting features that could be used by bats were seen.	Negligible bat roost suitability

The site is situated near a railway line, which itself is lined with scrub and trees. This provides connectivity to the wider landscape for foraging and commuting bats, as they will use the linear features within a landscape to disperse, particularly as the treeline connects to the tree corridors around the River Thames and Caversham Lakes to the west and Sonning Golf Club to the east.

Overall, the suitability of the property to support roosting bats is rated as 'low', considering the condition of the building and its context within suitable foraging habitat for bats. As such, it is concluded that the proposed development has a low possibility for potential impacts on roosting bats. Therefore, in accordance with the guidelines one bat emergence/re-entry survey is required to determine the importance of this building to bats as without this further survey, the level of impact upon bats cannot be fully assessed. To ensure adequate coverage of all potential roost features, it is estimated that three observers will be required for the survey visit to observe all suitable roost features. To ensure that the survey effort conforms with interim guidance on the use of night vision aids, produced by the Bat Conservation Trust², three night vision cameras supported by infra-red lighting will be used to support surveyors.

This survey can be undertaken between May and August. The survey will be completed at dusk, during suitable weather conditions for bat activity to observe any bats emerging or re-entering roosts. Surveyors

² Bat Conservation Trust (2022). Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys.

will use ultrasonic recording equipment to try and establish the species of bat present. If bats are discovered, further surveys to classify the nature of the roost (day/maternity/social) may be required.

The identification of a bat roost would mean that careful timing of the development may be required in order to avoid impacts on bats, a precautionary 'soft strip' of tiles supervised by a licensed and suitably qualified bat ecologist and provision of permanent bat roosting features into the development may also be required, the nature of which will be dependent on the outcome of the one survey.

An EPS licence will be required for any actions that would directly disturb, modify or destroy a bat roost. This would include measures to replace the existing roosting habitat such as designing integral bat roosting opportunities into the building fabric such as bat tiles and internal voids/access points for bats, depending on the scale of impact.

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 buildings. 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.



Bat Access Tile Set, 2FR Schwegler Bat Tube, 2FE Schwegler Wall-Mounted bat shelters and Improved Crevice Bat Box.

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

Kind regards,



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APPENDIX 1 – Figures



Figure 1. Aerial image showing the location of 43 Old Bath Road, Sonning (indicated with a red outline). Site plan. Image produced courtesy of Google maps (map data ©2024 Google).

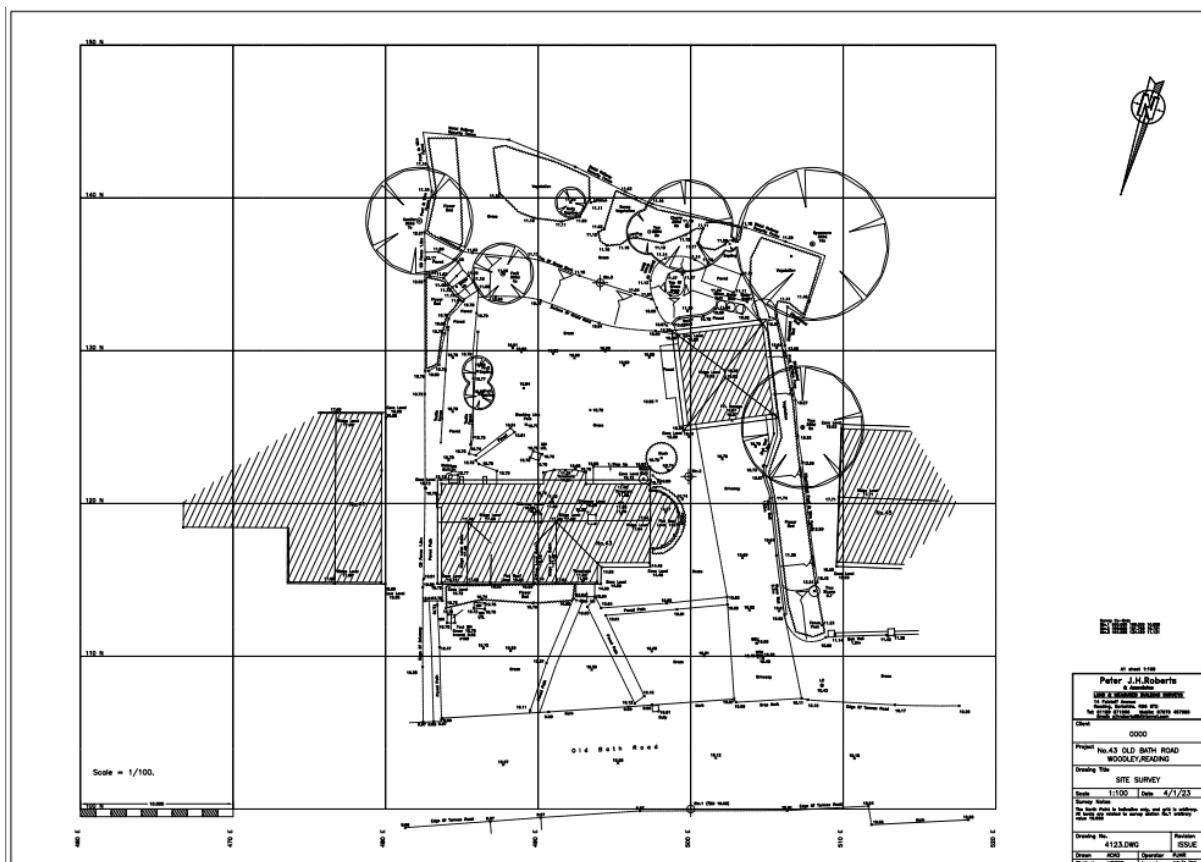


Figure 2. Drawings of the current property, courtesy of Peter J H Roberts and Associates, Drawing no. 4123.DWG, 04/01/2023.

APPENDIX 2 – Site Photographs



Photograph 1. The front elevation of the property.



Photograph 2. Flush roof and hanging tiles on the front aspect.



Photograph 3. Raised lead flashing on the roof of the orangery.



Photograph 4. Raised lead flashing around the chimney and slipped roof tile on the rear aspect.



Photograph 5. Loft void showing fibreglass insulation.



Photograph 6. Old wasps' nest and connectivity throughout the loft void.



Photograph 7. Detached garage with flush roof tiles.



Photograph 8. Internal roof pitch of the garage.

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 Trust³ 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 cat's 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

³ 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:

https://cdn.bats.org.uk/uploads/pdf/Resources/EUROBATSGuidelines8_lightpollution.pdf?v=15421093