



The Ecology Co-op

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13th March 2025

Ref: Potting Shed conversion at Balcony House, Woodchurch, TN26 3SX.

To whom it may concern,

Background.

The Ecology Co-op undertook a bat scoping assessment at Balcony House on the 28th February 2025 at the request of Jack Coleman, Studio on Sea. This assessment was undertaken further to a proposal to convert the interior of the potting shed into a more liveable space. The survey was undertaken in accordance with best practice guidance produced by the Bat Conservation Trust¹.

The site is situated on the outskirts of Woodchurch, Kent in a rural situation. It comprises three buildings; a main dwelling house, and two outbuildings, one converted into a home office, and a small brick shed with pitched peg-tiled roof. The site location is shown in Figure 1, Appendix 1.

The proposals for the site are shown in Figure 3, Appendix 1.

The planned proposal involves the complete refurbishment of the interior of the potting shed, the exterior is to be unaffected. The planned proposals is understood to involve the installation of insulation beneath the tiles, plasterboard and plaster to create a vaulted ceiling, , along with boarding and plaster skimming of the walls. There will be a new wooden flooring also installed.

Findings.

Table 1 below summarises the bat roosting potential assessment. Both the exterior and interior of the building were inspected as part of the survey.

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

Table 1. Summary of structures/trees assessed for Potential Roost Features (PRFs) on the building(s). Please see Appendix 2, photographs 1 to – for further context.

Building section	Description of features	Assessment of suitability (Collins 2016)
Potting Shed - Interior	The potting shed is a small single storied brick construction building with a high void roof. The shed is unoccupied; however, the owner stores various items inside that they access daily. There are windows on the north and south walls of the building as well as strip lights in the roof, providing a combination of both natural and artificial lighting. A layer of bitumen lining extends across the roof, however, there are several holes which would allow bats access from the outside roof tiles into the space within. Gaps are present in the eaves, as well as around the top of the window frames and brickwork. The crossbeams of the wooden supporting frame does not clutter the space and supports cracks and crevices. No evidence of bats were identified within the inside of the potting shed; such as droppings, urine stains and consumed insects. However, the building interior is accessible and there are suitable crevice features present for roosting bats between the roof and lining, and along the ridge beam.	Moderate bat roost suitability
Potting Shed - Exterior	The exterior brickwork of the building is in good general condition without gaps, cracks and holes evident. However, there are gaps at the junction between the top of the wall and the eaves that would allow for bats to access the inner roof space and around the front and rear windows, there are large gaps between the brick and window frames, allowing access.	Moderate bat roost suitability
Potting Shed - Roof	The roof of the potting shed is covered with handmade clay peg tiles, some of which are damaged or missing, allowing for bats to access the space between the roof and bitumen felt lining and through holes into the building interior..	Moderate bat roost suitability

The proposed works to this building are understood to be limited to inside the existing structure, and therefore no impacts on semi-natural habitats are predicted. There are several semi-natural ponds surrounding the site with potential to support a good great crested newt population. If the proposed works are modified in any way that affects suitable terrestrial habitats for this species around the building, this impact assessment will need to be reviewed and updated.

Recommendations.

Given the moderate suitability rating of this building to support roosting bats and in consideration of this risk, a precautionary approach to the development is recommended in line with Bat Conservation Trust (BCT) guidelines (section 5.2.9), where it states that 'an ecologist should make a professional judgement on how to proceed based on all of the evidence available'. In this case, while there was no evidence of bats and it seems unlikely that bats regularly use the site for roosting, there are several potentially suitable features and, given that the site is located in a rural area, next to a house with high bat roost potential, further surveys are recommended to avoid doubt.

As per the BCT best practice guidelines, the overall potential for the building to support bats is rated as 'moderate' and is therefore recommended to complete a minimum of two bat emergence surveys during peak activity season from May to September, prior to the proposed developments beginning.

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

If roosting bats are confirmed by the emergence surveys, then a European Protected Species Licence will be required for the development to legally proceed. Mitigation to prevent harm to bats would be required as a condition of the licence. The survey findings will determine what level of mitigation would be required, but it is likely that it would involve timing works to avoid periods when bats are more sensitive to disturbance, and supervision by a licenced ecologist where works affecting roost sites takes place.

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

These enhancement measures will help illustrate that the proposals are in adherence of Paragraphs 187 (d) of the National Planning Policy Framework (NPPF) and should therefore be considered favourably within the planning process.



If the proposed works are modified in any way that affects suitable terrestrial habitats for great crested newts around the building, this impact assessment will need to be reviewed and updated.

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

Kind regards,

Emily Davies

Assistant Ecologist
BSc (Hons)



APPENDIX 1 – Figures



Figure 1. A map showing the approximate application site boundary outlined in red, and land under the same ownership outlined in blue. Image produced courtesy of Magic Maps (<https://www.magic.gov.uk/>), contains public sector information licensed under the Open Government License v3.0).

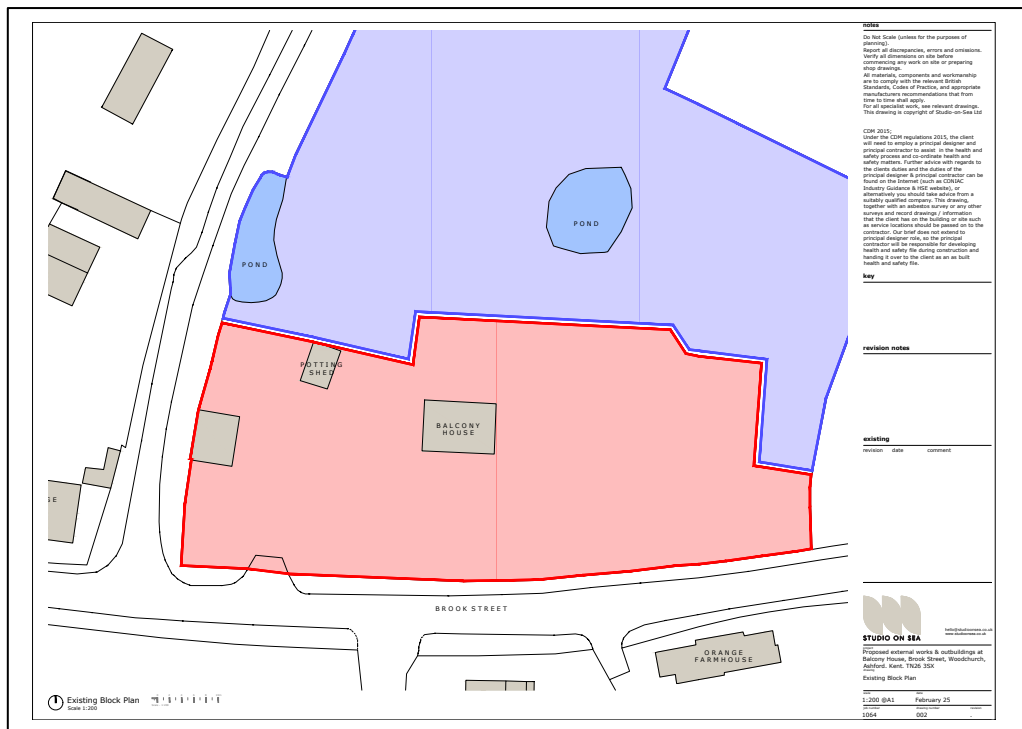


Figure 2. A map showing the approximate application site boundary outlined in red, and land under the same ownership outlined in blue. Image provided courtesy of Jack Coleman, Studio on Sea.

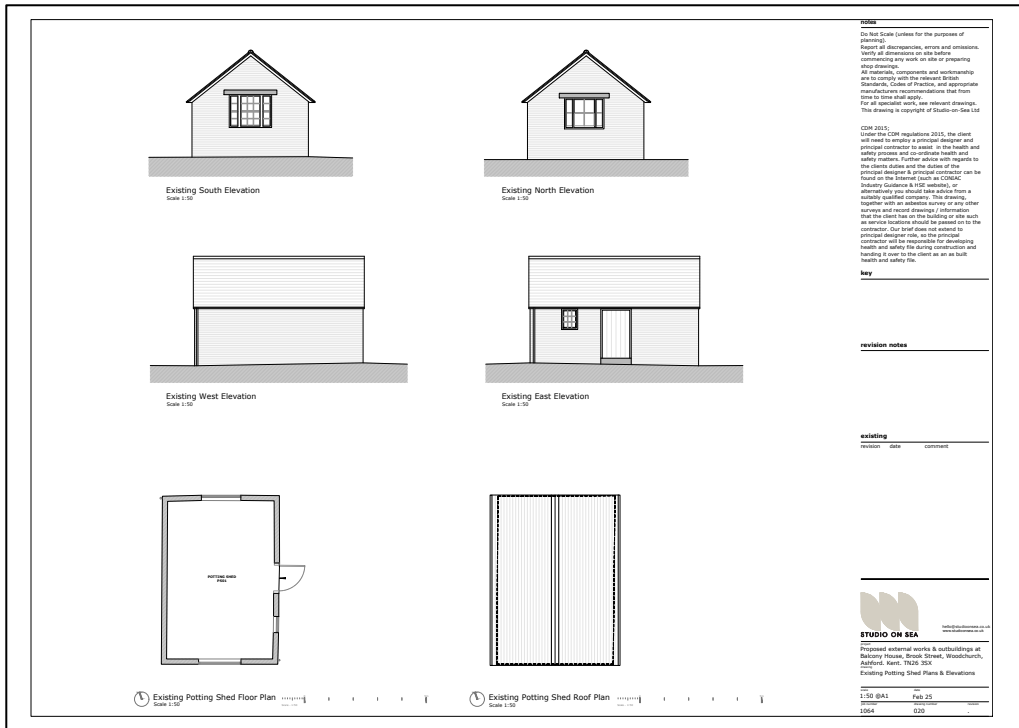


Figure 3: The current layout of the potting shed. Images produced by Jack Coleman, Studio on Sea.

APPENDIX 2 – Site Photographs



Photograph 1. The front, eastern side of the shed.



Photograph 2. The rear, northern side of the shed.



Photograph 3. The south side of the shed.



Photograph 4. The southern side of the shed.



Photograph 5. The window on the southern side of the property, a closer view of the wooden board surrounding the top of the window, with a large gap



Photograph 6. The same gap between the window frame and the wooden board, torchlight to show the depth of the crevice.

between, allowing access for bats.



Photograph 7. A 0.5 camera angle photograph showing the shed as well as some of the surrounding area.



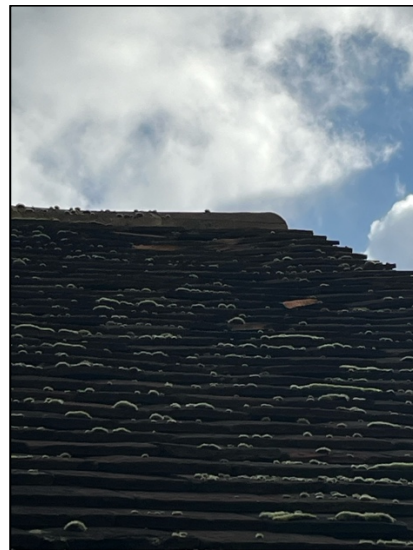
Photograph 8. The soffits and eaves of the shed.



Photograph 9. The roof of the building from the east side; showing the gaps between the roof tiles.



Photograph 10. The roof on the west side of the building, showing gaps between the roof tiles.



Photograph 11. A closer view of the roof, showing missing tiles and tile gaps, allowing for easy access to the internal roof.



Photograph 12. The eaves and soffits on the west side of the shed.



Photograph 13. The soffits and eaves on the west side of the shed.



Photograph 14. The inside of the shed, with wooden crossbeams.



Photograph 15. The opposite side of the shed, interior with wooden crossbeams.



Photograph 16. The main brick walls inside the property. Missing bricks at the top, allowing access to the eaves.



Photograph 17. The window on the western side of the shed, facing the main dwelling. Window providing natural light into the property.



Photograph 18. Further photograph of the metal plating over the eaves, gaps on the sides allowing for easy access.



Photograph 19. The roof from within the shed, showing the bitumen lining.



Photograph 20. The roof from the inside of the shed.



Photograph 21. The northern side of the roof from the inside of the shed, with a window providing natural light.



Photograph 22. The southern side of the roof from the inside of the shed, showing access points at the roof apex.



Photograph 23. The southern side of the roof from the inside of the shed, showing the window providing natural lighting.



Photograph 24. The bitumen lining with rips and tears throughout, providing access to the roof tiles.



Photograph 25. The bitumen lining with rips and tears throughout, providing access to the roof tiles.

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 Trust² 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

² 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