The Ecology Co-op
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10th February 2025

Ref: Thatch Cottage, Pond Lane, Worthing.

To whom it may concern,

The Ecology Co-op undertook a bat scoping assessment at Thatch Cottage, Pond Lane, Worthing, BN13 2RH on the 26th of July 2023; a subsequent survey assessment was undertaken on the 25th January 2025 at the request of Drew Bailey. This assessment was undertaken further to a proposal to reinstate the derelict and demolished building and construct two attached two-storey dwellings to the west of the existing property. The surveys were undertaken in accordance with best practice guidance produced by the Bat Conservation Trust[1].

The site is situated in the rural location of Durrington village, located to the north of Worthing town, the central grid reference of the site is TQ 11829 05048. The site comprises a small parcel of land measuring ~990m^2. It is dominated by a garden with a single derelict urban building located to the centre of the site. Given the nature and small scale of these proposals, this report has focussed upon localised site impacts only and did not consider the acquirement of local biodiversity records necessary, as per current guidelines. The site location is shown in Figure 1, Appendix 1.

The planned proposals will seek to reinstate the building including re-instating the roof and removing the overgrown surrounding vegetation to all aspects of the site. The proposals also seek to include the construction of a new building to the west of the existing that will form two residential units. The proposals for the site are shown in Figure 2, Appendix 1.

The building was initially assessed for its potential suitability for roosting bats in 2023 (by Dr Ryan Walker, MCIEEM, CEnv and class 2 bat licenced surveyor) when the project was paused; a second survey was commissioned in January 2025 (undertaken by Joshua Harwood, ACIEEM and class 1 bat licenced surveyor) to re-assess the potential suitability for bats. No significant changes to the building were noted between 2023 and 2025 with interior access not possible due to health and safety concerns and the collapsed roof structure. The remainder of the site was largely similar, however, several parcels of vegetation were considered to be more significantly overgrown (such as bramble *Rubus fruiticosus* agg.) to the north and east of the site and a previously identified pond (Photograph 9) was not found. Parcels of non-native vegetation including both *Buddleja* sp. and a bamboo plant were identified on site.

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

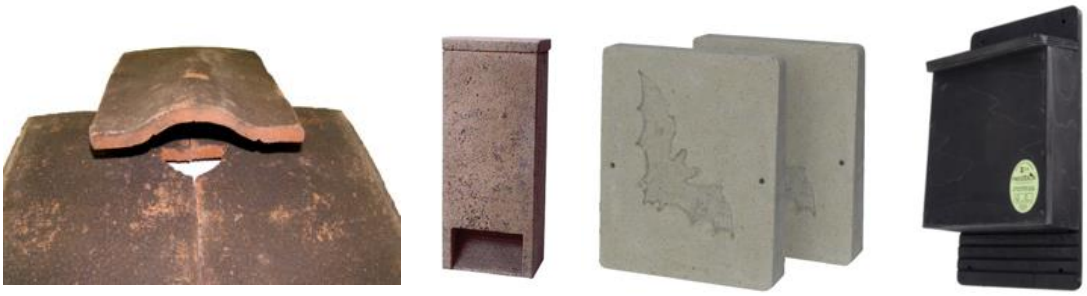
The building was a formally thatched roof cottage with a single brick chimney feature. The thatch cottage has collapsed inside the property, removing any former features that may have been present here. The chimney is still largely intact but no notable gaps or features were identified on site with any features likely to be too exposed to the exterior surroundings thus reducing the likelihood of a stable roosting environment. The external features of the building were comprised of brickwork that had been painted white, some paint had worn down exposing the bare brick but was largely intact with no potential access/egress points noted to the exterior. As an internal assessment could not be completed it cannot be ruled out that potential roost features may be present internally; however, this is considered likely to be limited to any collapsed roof beams that may house small gaps suitable for roosting bats where these gaps have both a clear flight path outside of the property and are not exposed to the elements. Although it cannot be ruled out, such scenarios are considered highly unlikely to be present on this site.

Overall, the suitability of the building to support roosting bats is rated as 'negligible' (as was the classification following the survey in 2023), 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; however, a toolbox talk and on site ecologist are recommended during the initial stages of clearing the site to ensure any possible features that may become present can be adequately inspected prior to removal.

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), should lighting be proposed.

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. 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 buildings 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.

The site was also assessed for its potential to support other protected/notable species such as amphibians and reptiles, however, given the habitats on site, the close proximity to urban settlements and limited sunlight due to shading from adjacent vegetation and buildings, the likelihood of amphibian and reptile presence is limited. It is recommended that a suitably qualified ecologist is employed to undertake a pre demolition walkover and provide a toolbox talk to site staff for both common and widespread reptiles and amphibians. The absence of the small pond during the 2025 survey, the lack of ponds in the wider habitats and the poor habitat suitability on site mean that the site holds negligible potential for great crested newts *Triturus cristatus.*



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

In summary, the proposed development is considered likely to have a negligible impact upon bats, amphibians and reptiles with proposed precautionary mitigation on site comprising the presence of a

suitably qualified ecologist to provide a toolbox talk to onsite staff and provide a pre works check of possible features inside the building that may have arisen (where safe to do so). In addition, the development works should include the removal of *Buddleja* and bamboo plant, which should be undertaken by a suitably qualified invasive species specialist to ensure that plants are removed without the risk of recolonisation or spreading.

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

Kind regards,

Joshua Harwood

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Level 1 bat survey licence holder
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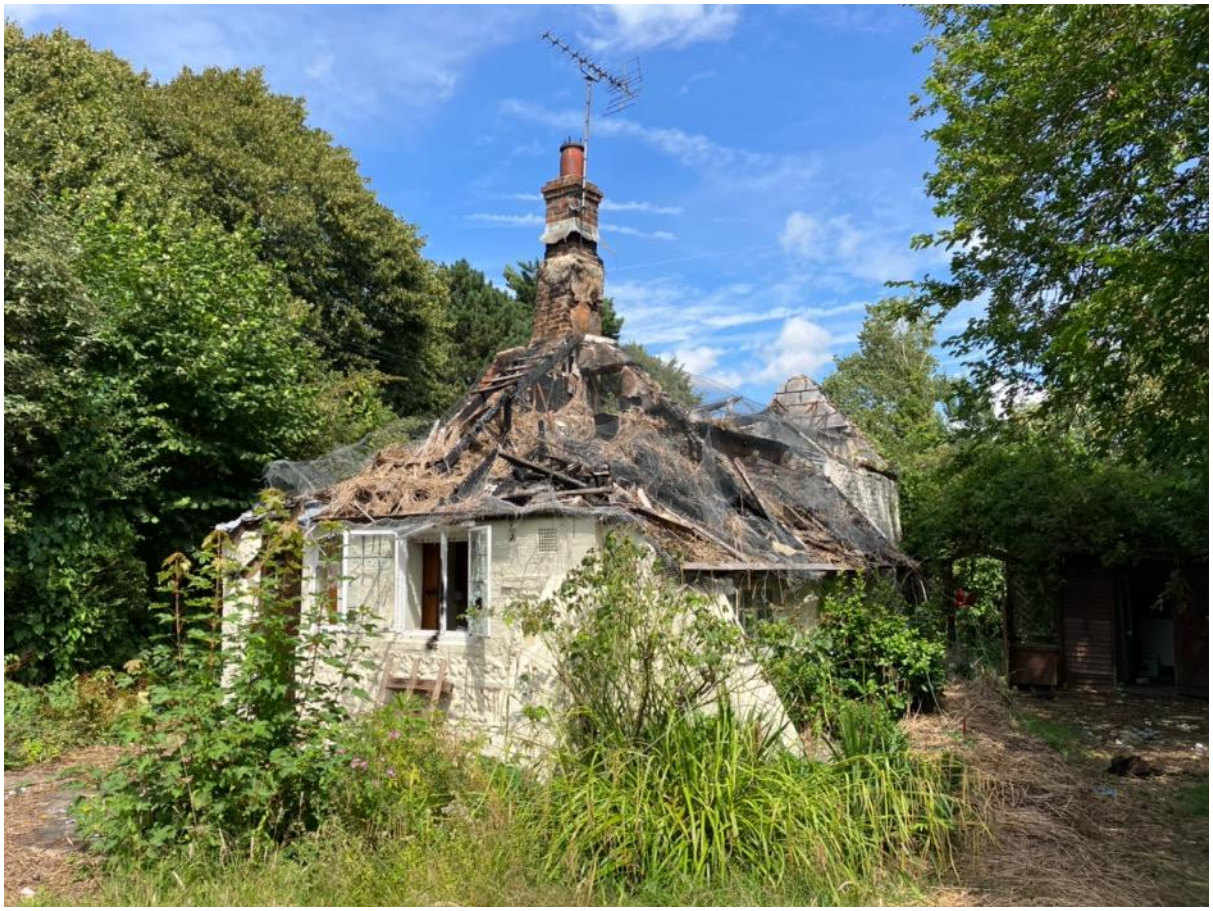
APPENDIX 1 – Figures

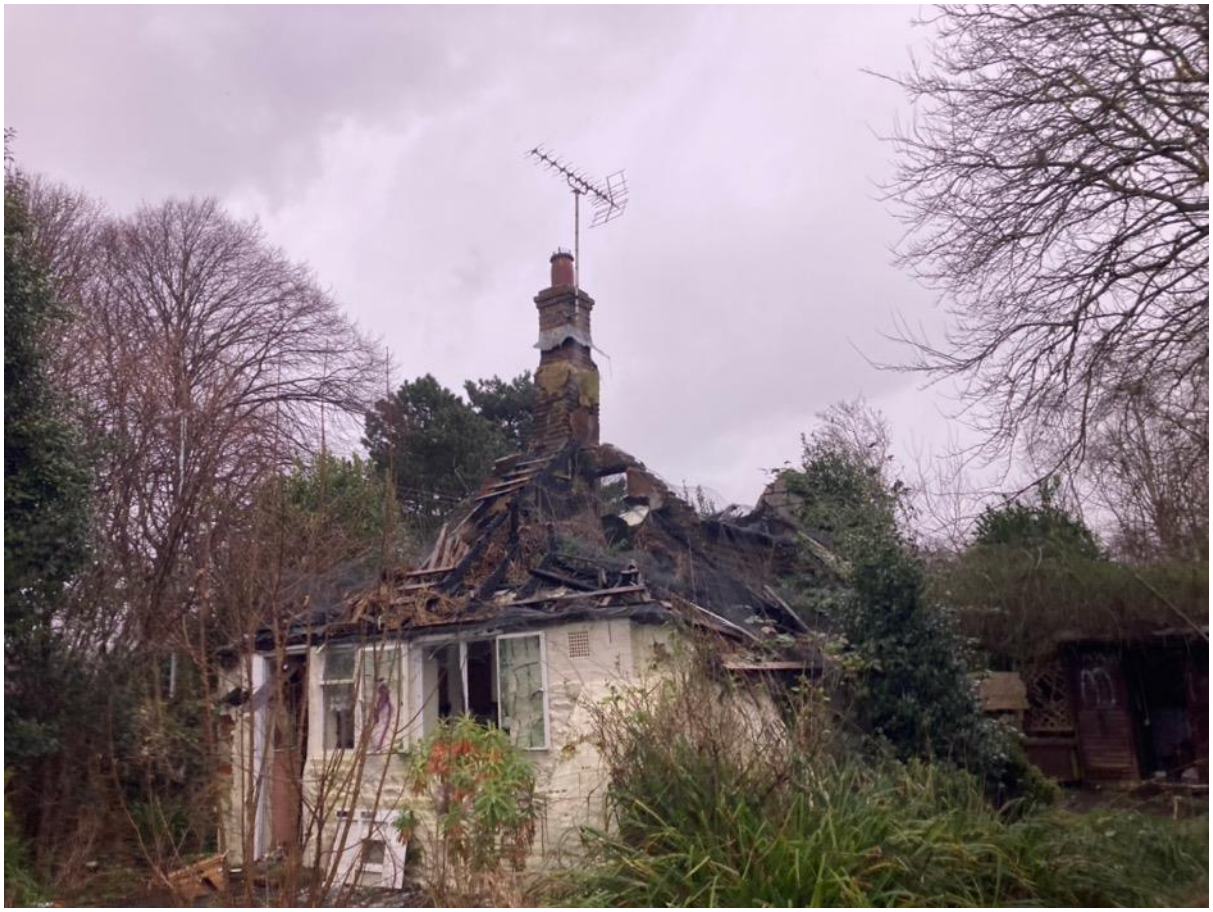
Figure 1. Aerial image showing the location of the site (indicated with a red outline). Site plan. Image produced courtesy of Google maps (map data ©2025 Google).

Figure 2. Concept scheme proposal, image provided courtesy of Manorwood. Drawing number 2206TH_R2_002, revision 0, dated 30.07.2024.

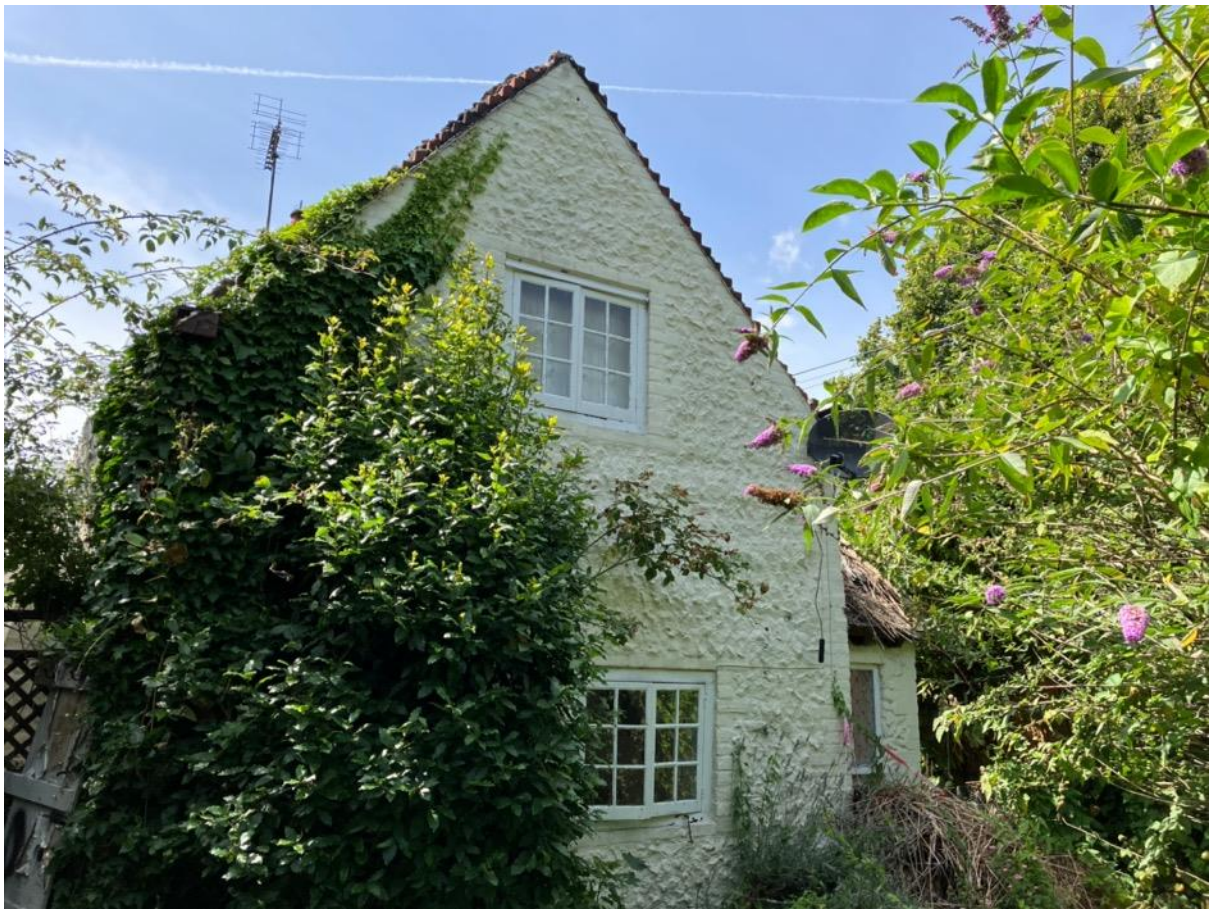
APPENDIX 2 – Site Photographs



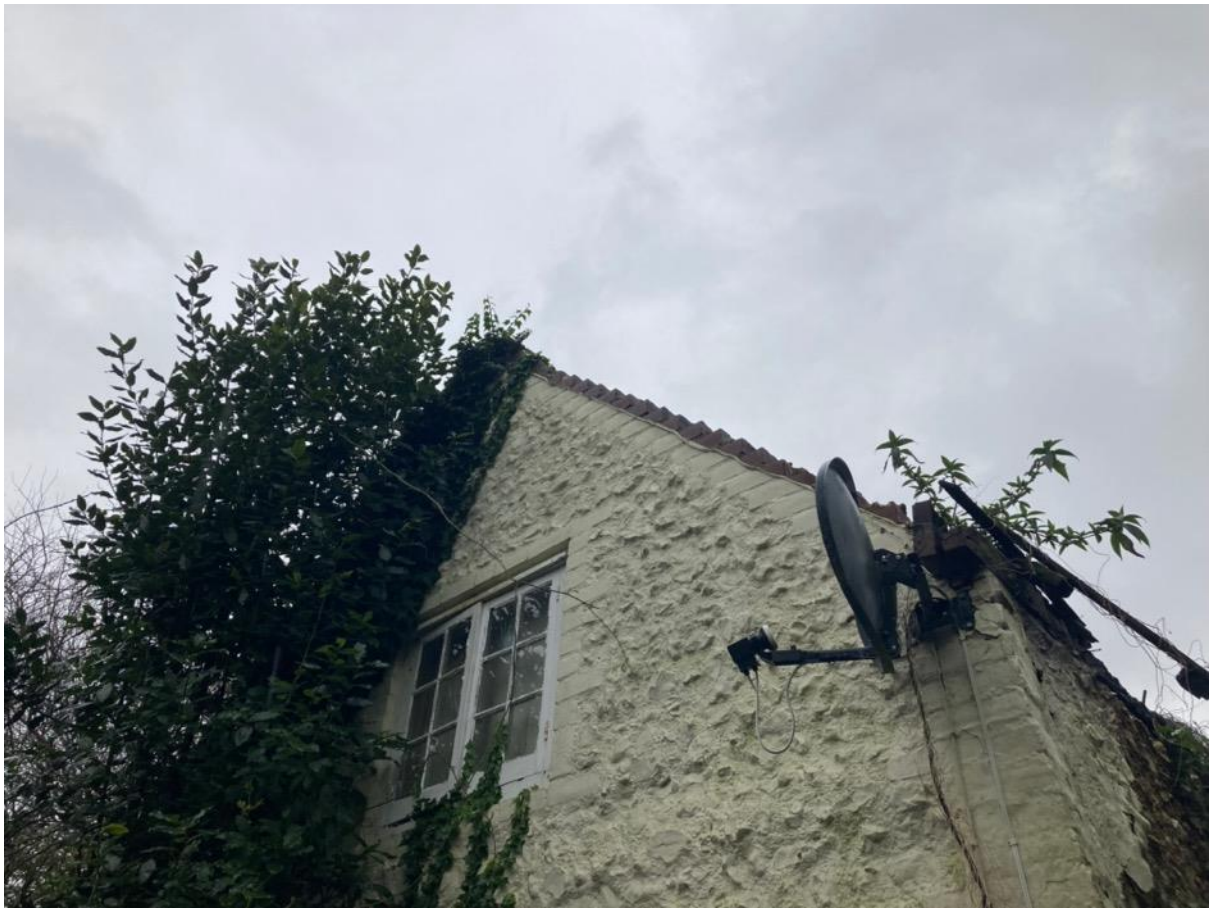
Photograph 1. The western aspect of the property as taken in July 2023.



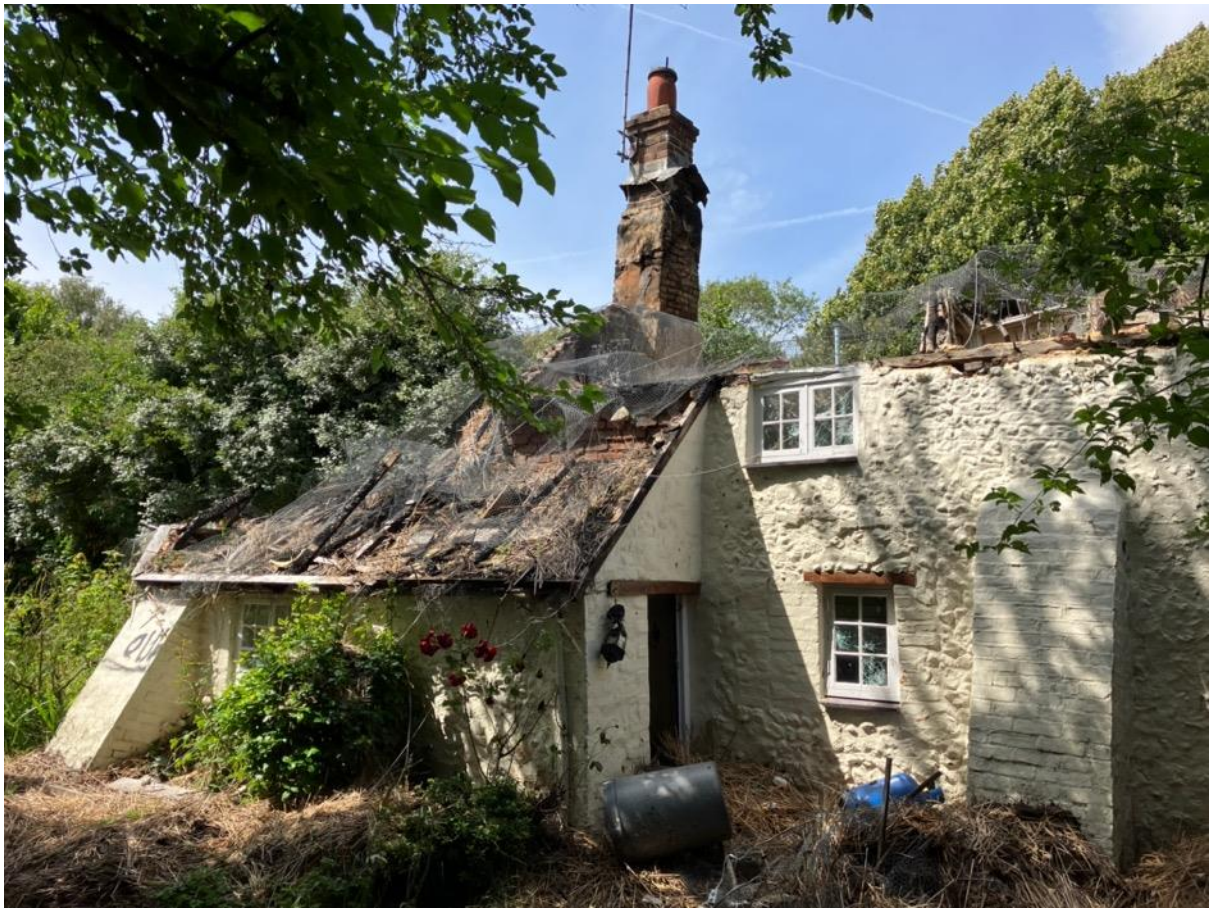
Photograph 2. The western aspect of the property as taken in January 2025.



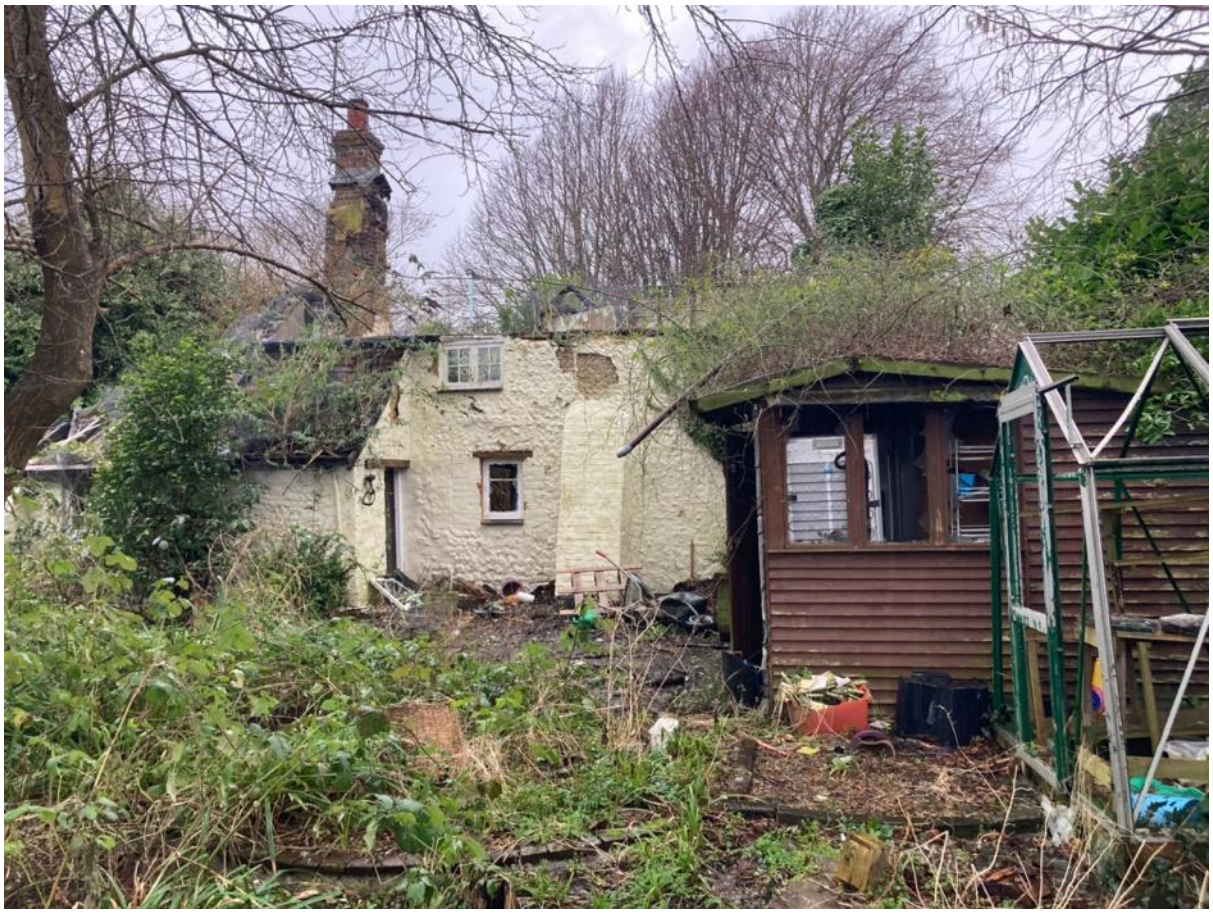
Photograph 3. The eastern aspect of the property as taken in July 2023.



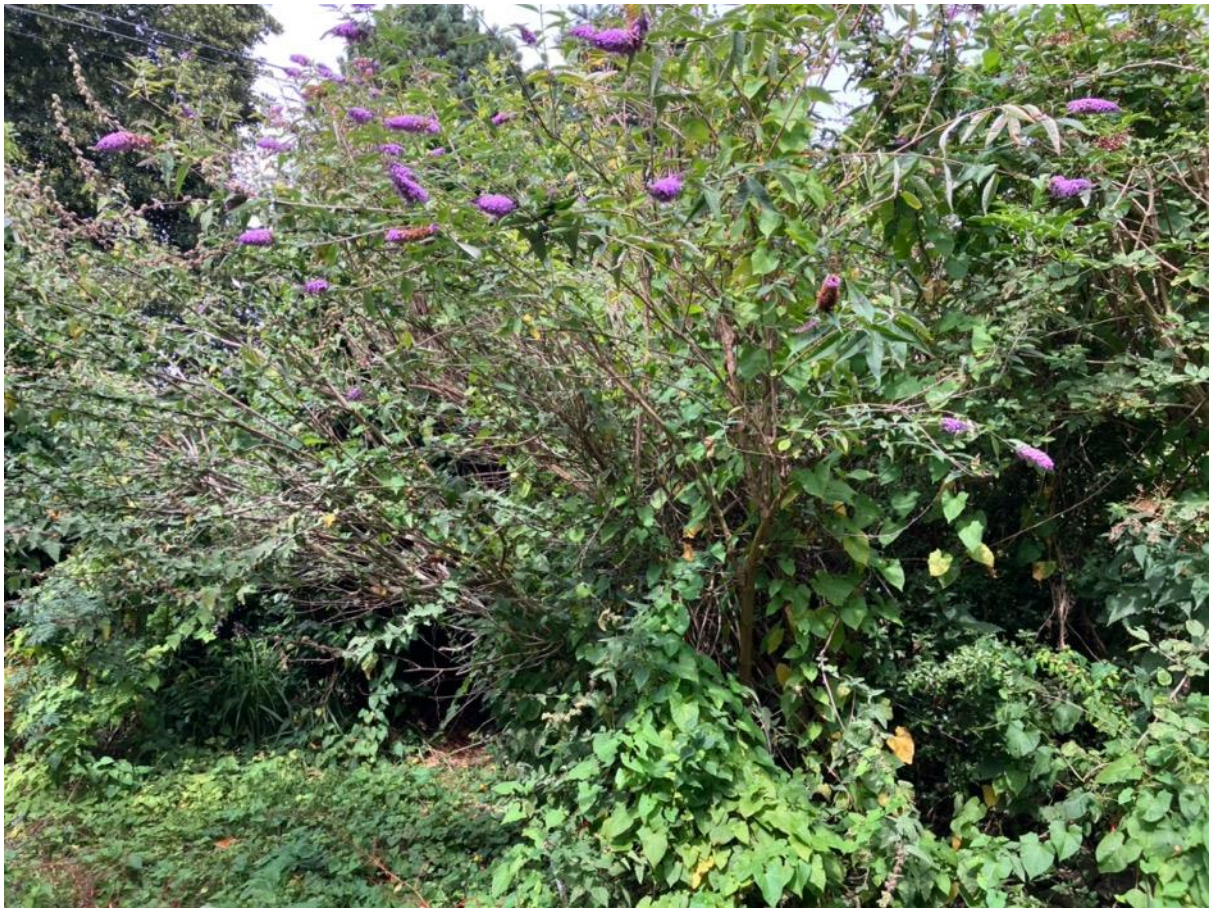
Photograph 4. The eastern aspect of the property as taken in January 2025.



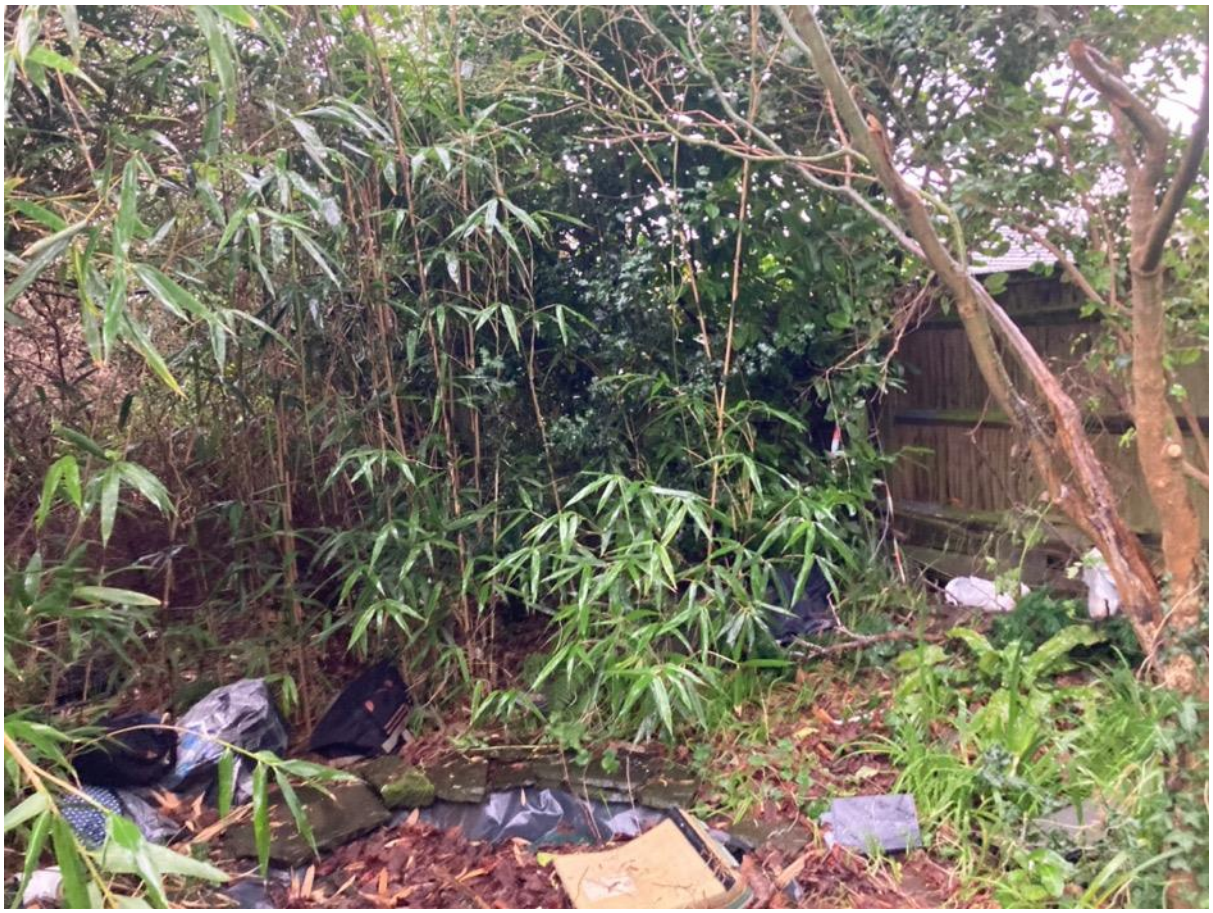
Photograph 5. The southern aspect of the property as taken in July 2023.



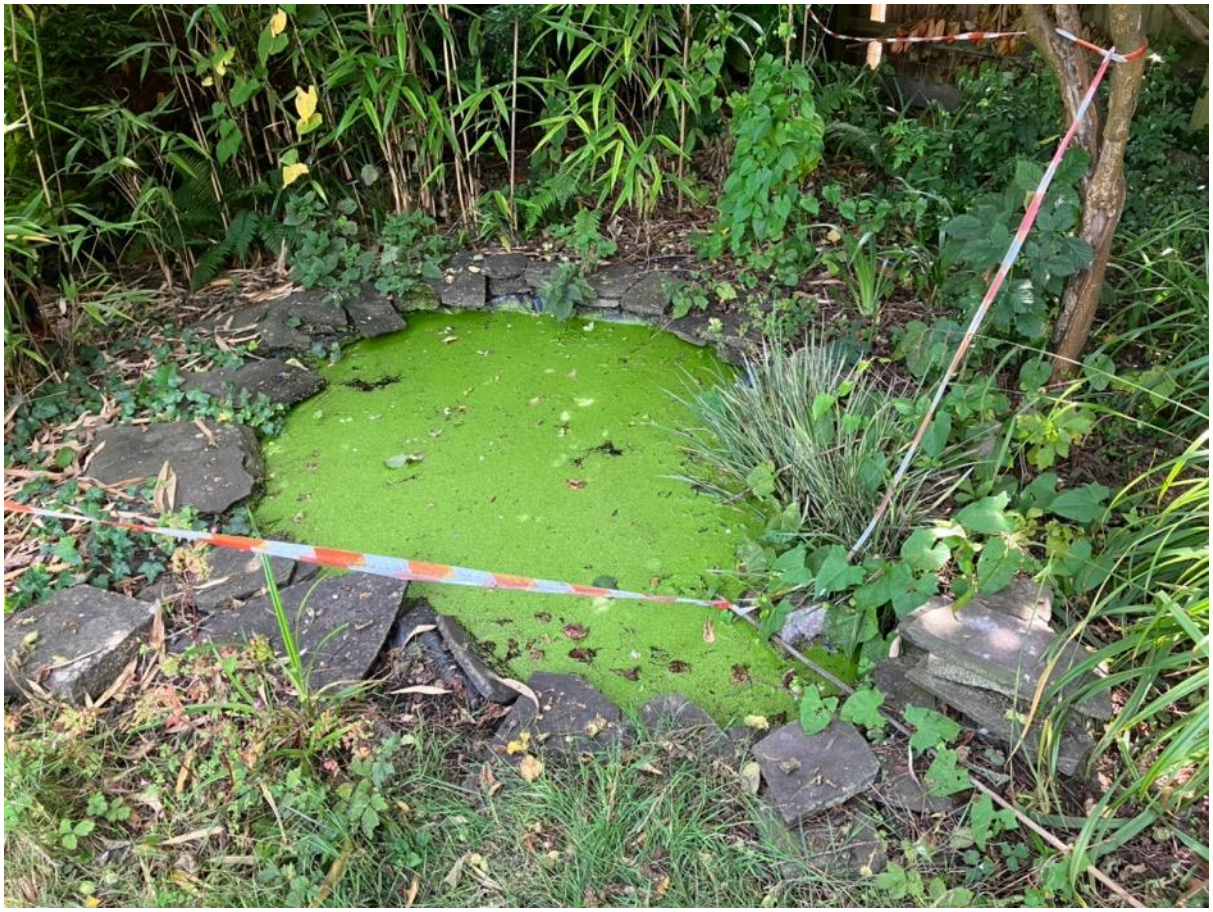
Photograph 6. The southern aspect of the property as taken in January 2025.



Photograph 7. View of buddleia plant noted on site during the survey in July 2023.



Photograph 8. View of non native bamboo plant noted during the January 2025 survey.



Photograph 9. View of the small pond feature noted during the July 2023 survey.

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[2] 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=1542109376