DAYTIME BAT & NESTING BIRD SURVEY REPORT

TRIPHYLLA COTTAGE, MEMBURY

for

AGI ARCHITECTURE

March 2023

Lee Ecology
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Lee Ecology

CONTRACT SHEET

AGI Architecture

Triphylla Cottage, Membury

Daytime Bat & Nesting Bird Survey Report

Contract No.	Project Contact/Author	Issue No.	Date of Issue
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1. SUMMARY OF RESULTS & RECOMMENDATIONS

1.1 Results

1. The proposal includes the creation of a two-storey extension. The new roof will tie into part of the existing roof but no significant changes to the main roof are proposed. The survey site is centred on Ordnance Survey National Grid Reference ST 276 030.

2. A daytime bat and nesting bird survey was undertaken by an experienced and appropriately licensed ecologist from Lee Ecology on 20 March 2023. Weather conditions at the time of survey were wet, calm and overcast with an average ambient temperature of 10^0C.

3. The subject building is an end of terrace [occupied] property, located within the village of Membury, near Axminster. The site is surrounded in the wider landscape by agricultural land, patches of semi-natural broadleaved woodland and water courses.

4. No bats were seen in situ. A small number of old bat droppings, broadly characteristic of those produced by pipistrelle species, were noted in the roof void at the north-western gable end wall. No notable entry/exit points were observed where the new extension will be created/tied into the existing roof. A potential entry/exit point was noted at the north-western gable end wall (on the southern elevation); this will not be impacted or obstructed by the proposed works.

5. No major changes to the roof structure are proposed although the new extension will tie into part of the existing roof.

6. No impact on bat foraging/commuting behaviour, on the local scale, is anticipated as a result of the proposed development. The impact of lighting is

considered to be low due to the fact that the building is already occupied and within a residential area. No formal lighting scheme is proposed. No removal of mature vegetation is proposed as part of this application.

7. No active bird nesting was confirmed on the day of survey. The site is not considered suitable for barn owls.

1.2 Recommendations

The following recommendations are made to ensure compliance with wildlife legislation (e.g. the Wildlife and Countryside Act 1981 as amended, the Conservation of Habitats & Species Regulations 2010), biodiversity legislation (e.g. the Natural Environment and Rural Communities Act 2006), government guidance and best practice (e.g. UK Biodiversity Action Plan).

1. The main roof of the property will not be significantly altered by the proposed works and no potential bat entry/exit points will be obstructed. Potential disturbance is anticipated to be negligible if the works are undertaken outside of the summer months (May-September); it is considered reasonably unlikely that the roof void would provide suitable hibernation opportunities due to its temperature/humidity levels. Based on the survey findings to date, and applying proportionality, it is considered reasonably *unlikely* that the proposed works will impact upon bats or their roosts at the site, and on this basis recourse to further survey work and/or an EPS licence is considered unnecessary at this juncture. Due to the highly mobile nature of bats a precautionary approach is nevertheless recommended to ensure compliance with the strict UK and European legislation affecting bats and their roosts (see recommendations, below).

2. All works should be undertaken sensitively so as to minimise the impacts of noise, dust and vibration.

3. In the event that bats are found during these works, all works will need to halt until consultation has been made with an ecologist and Natural England. The bat should not be handled and should be left to disperse of its own volition (the material under which it was found should be replaced gently). Guidance is provided in the Appendix, for contractors, regarding tell-tale signs of bat occupation.

4. In order to promote biodiversity, as per current planning policy, a single integrated 'bat tube' should be incorporated within the completed build, as an enhancement feature (ideally near the apex of the gable of the new two-storey extension). This can be installed within the new cavity wall of the extension and provides an enclosed roosting area for bats. The front can be rendered and painted with only the small entrance visible (please see the Appendix for an example).

5. No development work should take place in proximity to an active bird's nest (only if applicable at time of works). For reference, the bird nesting season is recognised as generally being between March-August inclusive. The site should be checked by a suitably qualified ecologist immediately prior to works commencing only if there is any doubt as to the status of nesting birds on site. The ecologist will be able to identify any nesting birds and advise of appropriate safe working distances. Nests are deemed inactive once the young have fully fledged and there is no sign of adults bringing nesting material/food to the nest or sitting on eggs.

6. The results of this survey (on a standalone basis) are deemed to be valid for 12 months from date of issue. If development works are to be carried out after this time has elapsed an update check will be required to ascertain the site's current status (i.e. change in habitats, condition of buildings, species present etc.). Please be aware that, because the natural environment is dynamic, ecological reports generally have a limited period of validity. Many statutory authorities now regard one year as the maximum time that should elapse

before a report will need to be updated (this time period may vary depending on the Local Planning Authority in question).

2. INTRODUCTION

2.1 Scheme Background

The proposal includes the creation of a two-storey extension. This bat and nesting bird survey has been commissioned to provide supporting information on the possible presence of protected species at the site and direct appropriate further works including additional surveys, mitigation, compensation and licensing if required.

2.2 Survey Objectives & Limitations

The objectives of the survey were:

1. to carry out a bat and nesting bird survey of the site in order to determine the possible presence of these species in relation to planning requirements;
2. to provide a concise written report of the results, making any appropriate recommendations to ensure compliance with wildlife law and recognised best practice.

The daytime survey was undertaken in the month of March; it is recognised that field signs of bats can be identified by an experienced ecologist at any time of year (see Mitchell-Jones, 2004).

Bat activity surveys are often required to supplement daytime survey findings and are normally undertaken in the summer months (May – September inclusive). These surveys are beyond the scope of this current commission and are considered unnecessary at this juncture.

3. METHODS

3.1 Daytime Bat Survey

One licensed ecologist (bat licence registration number 2015-13745-CLS-CLS) undertook this survey on 20 March 2023 following the methods recommended by the Bat Conservation Trust and Natural England (BCT, 2016; Mitchell-Jones, 2004).

Equipment included a head torch, ladder, camera and binoculars.

A diurnal inspection was made for any bat field signs or evidence of bat roosting. Signs of bat activity may include droppings, feeding remains, absence of cobwebs, vocalisations, staining, scratch marks, odour and live/dead bats.

3.2 Nesting Bird Survey

Signs which indicate use by nesting birds may include concentrated droppings, feathers, nesting material, increased bird activity, eggs/egg shells and live/dead chicks.

4. RESULTS

4.1 Bat & Nesting Bird Survey

4.1.1 General Site Description

The survey site comprises an end-of-terrace [occupied] two-storey property, located within the village of Membury. The site is surrounded in the wider landscape by agricultural land, patches of semi-natural broadleaved woodland and water courses.

4.1.2 Triphylla Cottage

The roof void is accessed via a single access hatch (intact, kept closed) and is used for storage. A small covered water tank is present. The roof void is boarded out throughout and felt lining is in place. Electric lighting is present and is in working order. Height to apex is less than 1.5 metres. Fibreglass insulation is present beneath the floor boarding. The ridge area is heavily cobwebbed. A small collection of old bat droppings (broadly characteristic of those produced by pipistrelle species) were noted, at the north-western gable end wall. No potential entry/exit points were noted around the area where the new roof will tie in to the existing roof.

The internal rooms are considered unsuitable for roosting bats as the building is occupied.

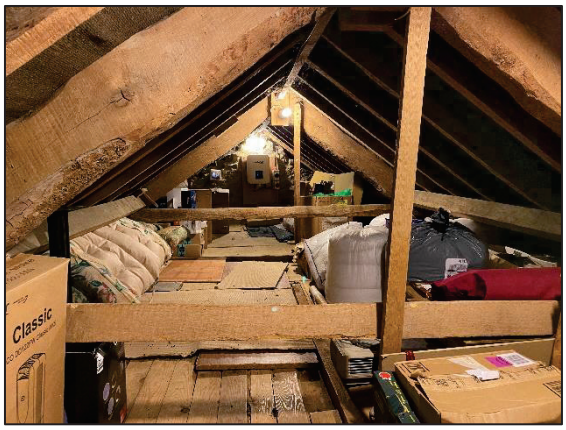


Plate 1: View of roof void (facing north-west)

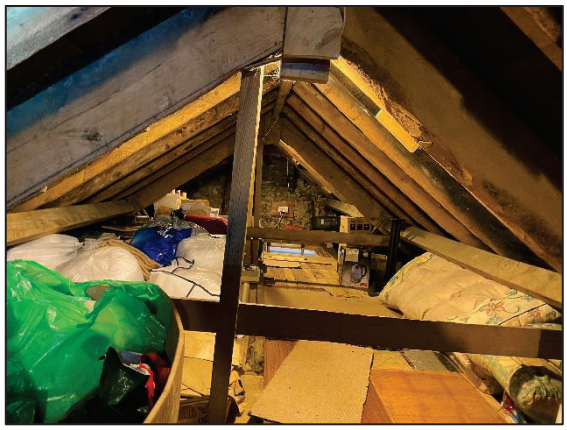


Plate 2: View of void (facing south-east)

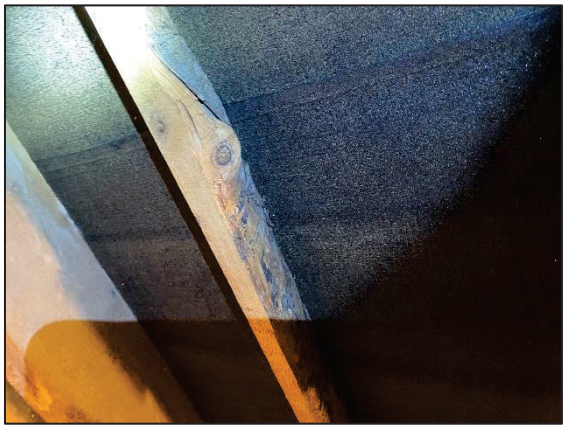


Plate 3: Underside of roof

Plate 4: View of north-western end of property (facing east)

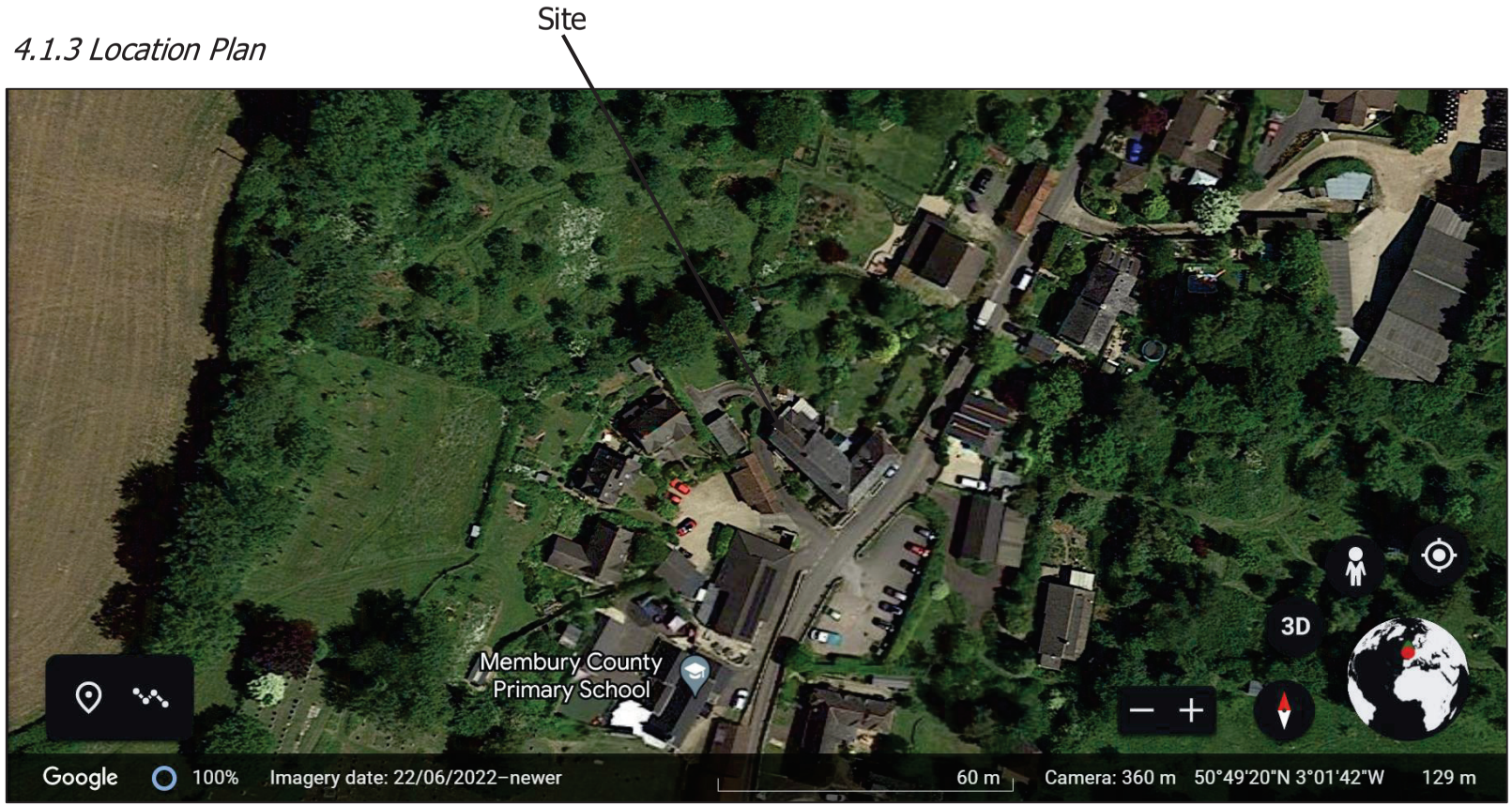
Plate 5: Rear of property and location of proposed works (facing south-west)

Plate 6: View of property from driveway (facing south)

The property is constructed of solid stone. The main roof is pitched and comprised of slates, which appear tightly fitted. The roof over the single-storey extension is leading into the roof of the conservatory. Timber barges are in place.

No obvious evidence of bat occupation or active bird nesting behaviour was recorded externally.

4.1.3 Location Plan



NORTH

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Please note: this plan is intended only to indicate the approximate location of features and should therefore, not be treated as an accurate scale plan.
Images sourced from Google Earth.

5. DISCUSSION OF IMPACTS

Applying proportionality, the potential impact on roosting bats (if present) is deemed to be low due to the scale and location of the work and providing that the works are undertaken outside of the summer months. No potential entry/exit points will be obstructed.

No negative impact on bat foraging and/or commuting behaviour as no mature vegetation (i.e. hedgerows, large trees) removal is proposed as part of the scheme. The effects of any artificial lighting are deemed to be negligible due to the small scale of the proposed works and the fact that the building is already occupied and within a residential area.

Please be aware that nesting birds *may* occur around the site during the summer months and care will be required to ensure compliance with the Wildlife and Countryside Act 1981 (as amended).

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7. QUALIFICATIONS & EXPERIENCE

Tamsin Lee BSc (Hons) MSc MCIEEM

Tamsin holds a BSc (Hons) in Zoology from the University of Bristol and an MSc in Environmental Conservation Management and has experience of a wide variety of ecology surveys. Her fieldwork skills include protected species surveys (reptiles, great crested newts, bats, dormice etc.), reptile translocations, butterfly surveys, phase 1 habitat surveys as well as various studies of terrestrial and marine life outside of the UK. Tamsin is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds survey licenses for bats, barn owls, and dormice within England. She has been registered with the Bat Conservation Trust (BCT) as a bat carer and is a member of various wildlife groups.

8. APPENDIX

8.1 Ecology & Legal Protection

8.1.1 Bats

There are seventeen species of bats recorded as resident in the UK (one of these, Alcathoe's bat (*Myotis alcathoe*) has only been discovered as resident in 2010); these species are split into two families, the Rhinolophidae or "horseshoe bats" and the Vespertilionidae or "vesper bats". The greater mouse-eared bat (*Myotis myotis*) was previously thought to be extinct as a UK mammal species until a single individual was discovered in 2002 at a known hibernation site in Sussex, this species is currently regarded by the Bat Conservation Trust as a vagrant/occasional winter visitor. All British bats are insectivorous, feeding on a wide range of invertebrates including gnats, beetles, spiders and moths. Bats have declined in range and numbers in the UK, due primarily to loss of roosts and suitable habitats (JNCC, 2004) as a result of agricultural intensification and development. All British bats use high frequency sound (range 20 - 130 kHz approx.) as a form of echolocation. This allows bats to orientate themselves within their environment, detect and catch prey and communicate with other bats. Healthy bats are solely nocturnal with 'peaks' of activity particularly noted around dusk and dawn during the late spring and summer months.

Bats will utilise a wide variety of structures for the purposes of roosting, including mature trees, caves, mines, buildings (both modern and ancient), bridges and tunnels. They are also commonly known to use purpose-built bat boxes and even empty bird nest boxes. Different types of roost are used by bats at different times of year; the most significant roosts sites are typically maternity and hibernation sites. Maternity roosts, where large numbers of female bats congregate to give birth and rear their young, are typically associated with warm, sheltered conditions. Hibernation sites are characterised by stable temperatures and high humidity. The use of roosts is rather unpredictable (although some species appear to be more 'loyal' to roosts than others), particularly amongst tree-roosting species, but female bats are typically loyal to maternity roosts.

The Conservation of Habitats and Species Regulations 2017 transpose the stipulations of Council Directive 92/43/EEC ("The Habitats Directive") into UK Law. European Protected Species (EPS), which include bats, are listed in Annex IV of the Habitats Directive, and are thus afforded strict protection. Some bat species are regarded as being of higher conservation concern in a European context, and these are listed under Annex II of the Habitats Directive. The habitats of species listed on Annex II may be candidates for the designation of Special Areas of Conservation (SACs). Annex II bat species include the barbastelle, Bechstein's and the two horseshoe bats. It should be noted that there is no longer a defence of harmful actions being "the incidental result of an otherwise lawful operation" for EPS. Specifically, the following actions are prohibited under this legislation:

- deliberate capture, injury or killing;
- deliberate disturbance likely significantly to affect population survival, breeding, rearing young, local distribution or abundance;
- damage or destruction of a breeding site or resting place;
- possessing, controlling transporting, selling or exchanging, or offering for sale or exchange, any bat or any part of a bat or anything derived from one.

The Wildlife and Countryside Act 1981 (WCA) provides protection to all British bat species. The WCA has been amended several times but was most recently strengthened by the Countryside and Rights of Way (CRoW) Act 2000, the Natural Environment and Rural Communities (NERC) Act 2006 and by the Conservation of Habitats and Species Regulations 2017 (above). The WCA specifically prohibits intentional or reckless damage of roosts. Sites known to be used by roosting bats are regarded as roosts regardless of whether they contain bats at the time of survey. This is based on the fact that bats will use several different roost sites throughout the year.

The NERC Act consolidates the requirements of the CRoW Act in placing duties upon government agencies, including local authorities, to ensure the conservation of Biodiversity.

8.1.2 Nesting Birds

All wild birds are protected under part 1 of the Wildlife and Countryside Act, 1981. Therefore, in the UK it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is being built or in use.
- Kill, injure or take any wild bird
- Take or destroy the eggs of any wild bird

To avoid committing an offence no works should be carried out on a structure/ feature that is being used by nesting birds. Nesting is deemed to be over when the young have fully fledged.

Certain species, which are listed in Schedule 1 of the Wildlife and Countryside Act, receive special protection. In these cases any form of intentional or reckless disturbance when they are nesting or rearing dependant young, constitutes an offence.

8.2 How to Identify Field Signs of Bats

The following notes are provided as a guide for site workers and operatives if they come across field signs that give rise to suspicion of bats in particular (it is assumed that all site operatives can identify bird nests and bird droppings).

Signs of bat activity may include (English Nature 2002; Mitchell-Jones 2004; JNCC 2004) the following:

- Droppings – Fresh droppings are soft and black, becoming lighter in colour as they age. Bat droppings typically contain fragments of insect exoskeleton and crumble (unlike those of small rodents, which typically harden with time). Bat droppings differ significantly from those of birds in that they have a distinctive 'bullet' shape and have none of the associated white uric acid powder associated with bird faeces. Bat droppings will stick to surfaces including walls, windows and window ledges. They may also become caught in cobwebs below a roost site or feeding perch.
- Feeding remains - these include the discarded wings of flying invertebrates, which may accumulate under a well-used feeding perch. Some species, such as the brown long-eared bat, favour moths of the noctuid family. Hence the accumulated wings of these moths assist in suggesting the presence of this bat.
- Oil staining - the fur of bats may leave an oily residue on surfaces close to occupied roost sites and access/egress points.
- Diurnal vocalisations - these are most pronounced at larger roost sites during periods of hot weather.
- Absence of cobwebs - a well used bat roost and its access points are typically clear of cobwebs.
- Scratchings - scratch marks produced by the claws of many bats may be apparent close to the access point for a well-used roost.
- Dead bats.
- Tracks in dust.
- Odour – most bats have a distinctive odour and certain species, such as the

noctule and soprano pipistrelle, are noted for their pungent roosts resulting from their urine scent marking activity and oily fur.

8.3 Examples of Bat Enhancement Features

Bat Tube

2FR Schwegler Bat Tube – designed to be built into cavity walls

Suppliers include:

- NHBS