DEVON & CORNWALL
ECOLOGY

The Flat,
Holly Bridge House,
Bodmin,
Cornwall,
PL30 4AN

[redacted]

E-mail: devonandcornwallecology@gmail.com

Phase 1 & 2 bat and nesting bird survey report

Site: Barn at Trevenn,
Clubworthy,
North Petherwin,
PL15 8NZ

For: Mr. & Mrs. Miles

Report prepared by: Richard Bates, ACIEEM, BSc(Hons).

September 2023

	Name	Date	Signature
Report prepared by:	Richard Bates, BSc ACIEEM	14.09.23	[redacted]

This report was prepared by Devon & Cornwall Ecology at the instruction of the named clients. It should be noted that whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment. Devon & Cornwall Ecology accepts no responsibility to third parties whom use this report or any part thereof. Any such party uses this report at their own risk.

PLEASE NOTE: The contents of this report are based on the latest survey data. Should a period of more than 12 months pass between the issuing of this report and work commencing on a project, an update survey of the site may be required.

Devon & Cornwall Ecology,
The Flat,
Holly Bridge House,
Fletchersbridge,
Bodmin,
Cornwall,
PL30 4AN

[redacted]
Email: devonandcornwallecology@gmail.com

Reference Number: DCE1606

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Executive Summary

Survey date:	30th June 2023
Phase 2 surveys:	15th August & 5th September 2023
Phase 2 static survey:	15th – 19th August 2023
Location:	Barn at Trevenn, Clubworthy, North Petherwin, Cornwall, PL15 8NZ
Grid Reference:	SX 27464 92724
Surveyor:	Richard Bates, ACIEEM BSc, bat licence ref: 2017-30400-CLS-CLS

Devon and Cornwall Ecology was commissioned to undertake a phase 1 bat survey of an outbuilding on behalf of the clients, Mr. & Mrs. Miles. The survey was undertaken to support a planning application to convert the structure to residential use.

A full internal and external inspection of the building was conducted on the 30th June 2023, looking for signs of use by bats and/or nesting birds. The survey was conducted in suitable weather conditions and in line with guidance available in Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins et al, 2016).

The survey identified the presence of two confirmed bat roosts within the structure. A sample of droppings was collected for DNA analysis – the results confirmed the species present in the structure as whiskered (Myotis mystacinus) and common pipistrelle (Pipistrellus pipistrellus) bats. As evidence of roosting bats was recorded phase 2 emergence surveys were commissioned and undertaken.

The surveys confirmed the presence of a day roost used by a max count of two common pipistrelle bats. One whiskered bat was also recorded emerging from the structure, confirming the presence of a day roost for this species. The access point was identified as being at the eaves of the southwest corner.

Day roosts for common and rarer bats species have been confirmed at the site. As the proposed conversion would include the demolition of these roosts, a European Protected Species licence will be required for the development. Recommendations have been included in section 5 detailing the process involved with obtaining the EPS licence. Suitable mitigation measures have also been presented to compensate for the loss of the identified roost.

Nearby linear features (walls and hedgerows) were assessed as having moderate potential to support foraging and commuting bats. The proposed development will not impact on these features directly but may result in disturbance through additional artificial lighting. Recommendations have been made in section 5 to minimise this disturbance.

No evidence of nesting birds was noted during the survey and no further survey work is required regarding nesting birds.

1. Introduction

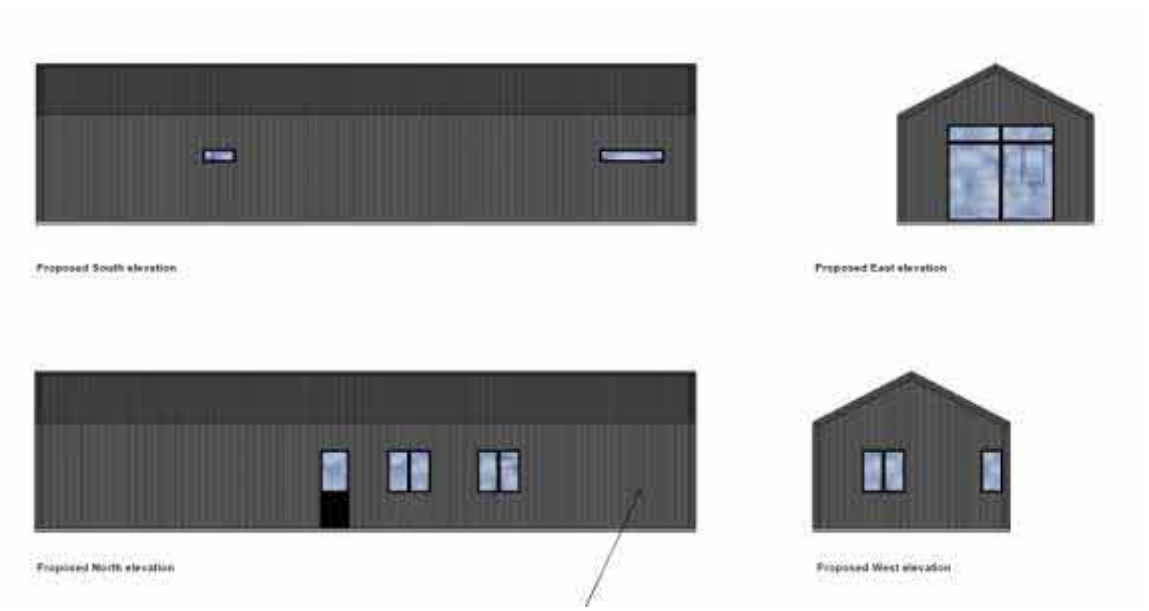
Devon & Cornwall Ecology were commissioned to undertake an initial phase 1 bat and nesting bird survey on an outbuilding at Trevenn, Clubworthy. The survey was undertaken to support a planning application to convert the outbuilding to residential use. The survey was undertaken by Ecologist Richard Bates BSc (Hons) who is an experienced field ecologist and consultant with a licence to survey for bats (2017-30400-CLS-CLS, Level 2). Subject to a Professional Code of Conduct, Richard is an Associate Member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

The site is under the ownership of the clients, Mr. & Mrs. Miles, and is located in a rural setting towards the southern edge of the hamlet of Clubworthy. In its immediate setting the site is bordered by a residential property to the south, rural lanes to the east and north and an agricultural field to the west.

In the wider landscape the site is located in a setting that is very favourable for bats; a network of tree-lined watercourses and agricultural fields are present in all directions. Areas of woodland and mature hedgerows are also present. These are likely to provide good foraging opportunities and are connected to the site via rural lanes and agricultural hedgerows. This favourable habitat extends for a considerable in all directions. No substantial urban development or transport infrastructure is present within 2km and no significant barriers for commuting bats were noted.

Wider landscape view of Trevenn, Clubworthy (Google Earth Pro).	Approximate site location

Site layout at Trevenn, Clubworthy (Google Earth Pro).	Approximate outline of existing building



Proposed development at Trevenn, Clubworthy	

2. Species records and desktop survey

A data search of bat records within a 5km radius of the site was requested from the local records centre, the Environmental Record Centre for Cornwall and the Isles of Scilly (ERCCIS). Bats records from within the last 10 available years have been presented in Table 1 below:

Table 1 - Bat records within 5km of Trevenn, Clubworthy, 2013 - 2023

Common name	Species	Relevant legislation	Records
Whiskered	Myotis mystacinus	Hab Regs Sch.2, WCA Sch. 5	One record from 2017.
Natterer's	Myotis nattereri	Hab Regs Sch.2, WCA Sch. 5	One record from 2017.
Noctule	Nyctalus noctula	Hab Regs Sch.2, WCA Sch. 5	Three records from 2013 – 2017.
Common pipistrelle	Pipistrellus pipistrellus	Hab Regs Sch.2, WCA Sch. 5	16 records from 2013 – 2018.
Soprano pipistrelle	Pipistrellus pygmaeus	Hab Regs Sch.2, WCA Sch. 5	Five records from 2014 – 2021.
Brown long-eared	Plecotus auritus	Hab Regs Sch.2, WCA Sch. 5	28 records from 2013 - 2018.
Greater horseshoe	Rhinolophus ferrumequinum	Hab Regs Sch.2, WCA Sch. 5	One record from 2018.
Lesser horseshoe	Rhinolophus hipposideros	Hab Regs Sch.2, WCA Sch. 5	Three records from 2015 – 2018.

Additionally, a search of granted European Protected Species licences (through the Natural England Magic Map website) returned three records of bat licences being issued within 2km of the site. These licences were issued for common pipistrelle, brown long-eared, greater horseshoe, lesser horseshoe and whiskered bats. One licence was issued within Clubworthy in 2019 for a nearby property, although the exact location cannot be identified from the information available. None of the licences affect maternity colonies for the species listed.

3. Methodology

Equipment

- Camera
- Binoculars
- Ladder
- Endoscope

The bat survey consisted of a full internal and external inspection of the building due to be affected by the proposed works. The survey method consisted of searching for evidence of bats, including bat

droppings, corpses, scratch marks, urine staining, grease marks and clean cobweb free areas. Particular attention was paid around potential access points, attic spaces (where accessible) and crevice roosting features within each structure and on its outside. Binoculars were used to assess potential crevice features. Bats do make audible squeaks and these were listened out for by the surveyor during the survey. The methodology used to search this site is consistent with the guidelines provided in the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins et al, 2016). The building was assessed for their potential to support roosting bats based on the criteria set out in Table 2 below:

Table 2 - Criteria for assessing bat roosting potential of buildings and trees

Confirmed Roost	Evidence of bat occupation found.
High Roosting Potential	Buildings or trees with significant roosting potential, either because they contain a large number of suitable features or the features present appear optimal due to their size, shelter, conditions and surrounding habitat.
Moderate Roosting Potential	Buildings or trees with one or more potential roosting features that may be used by bats but are unlikely to support a roost of high conservation status.
Low Roosting Potential	Buildings or trees with few features that may be used opportunistically by bats but are unlikely to be used on a regular basis due to the size, location, conditions and/or suitability of nearby habitat.
Negligible Roosting Potential	Buildings and trees with negligible suitable features and poor quality surroundings.

The site was also assessed for potential to support commuting and foraging bats, based on the criteria set out in Table 3 below, adapted from the Good Practice Guidelines (Collins et al, 2016):

Table 3 - Criteria for assessing bat commuting and foraging habitats

Suitability	Description of habitats
Negligible	Negligible commuting features on site and/or unsuitable foraging features, such as large areas of hard standing.
Low	Habitats that could be used by small numbers of commuting bats, such as gappy hedgerows or sites with limited connectivity to the wider landscape. Suitable but isolated foraging habitat that could be used by small numbers of bats, such as small patches of scrub or lone trees.
Moderate	Continuous commuting habitats connected to the wider landscape, such as a line of trees and scrub or linked residential gardens. Habitat that can be used for foraging and is connected to the wider landscape, such as trees, scrub, grassland and water.
High	Continuous, high quality habitat with good connectivity to the wider landscape. This would include features such as watercourses, river valleys, hedgerows and woodland edges. High quality foraging habitat that well connected to the wider landscape and likely to be used regularly by bats, such as broadleaved woodland, tree lined watercourses, grazed parkland or sites that are close to and/or connected to known roosts.

A summary of legislation relating to bats can be found in Appendix 1 of this report.

4. Results

4.1.1 Bats and nesting birds – outbuilding B1

The survey noted the following about the detached structure:

Photograph 1– View of the south and east aspects.

External

The building is a single storey corrugated metal outbuilding with a pitched, corrugated metal roof. The roof panels are in good condition with no suitable gaps noted beneath the folded metal ridge. Folded metal bargeboards are present on the gable ends. Large, unsuitable gaps are present beneath the boards.

Wooden bargeboards are present at the eaves of the building. Gaps are present between the boards and corrugated metal. Whilst most of these are shallow, exposed and generally unsuitable for bats, gaps leading to the interior were noted in south west corner of the building. These gaps lead to potential crevice features in the wooden frame inside the building. Individual bat droppings were noted around these gaps.

uPVC guttering is present and in good condition. No gaps were noted around these gutters.

Two large wooden and metal doors are present. These are habitually closed and no significant gaps were noted between the doors and the frame.

Wooden framed windows are present. These are in good condition with no gaps noted.

Photograph 2– Internal view of the building.

Internal

The building has a wooden frame with a single skin of corrugated metal walls and roof. The structure has no separate void and is open to the ridge line.

No lining is present beneath the roof panels.

The building uses a traditional frame with large supports. Gaps were noted around these large timbers, particularly at the gable ends adjacent to the metal walls. Gaps were also noted around the timbers at the top of the walls and between the rafters and roof panels.

The interior is reasonably well lit from several windows and skylights. It is an occasionally used space with fairly regular human disturbance.

A total of approximately 50 bat droppings were recorded within the building. These were located at either end of the building at the gable ends, with additional droppings noted around the timbers of the identified access point. It is possible that additional droppings are present at the southwest end that were not viewable. An additional ~ 20 scattered droppings were noted elsewhere on the floor and on stored items and a small collection of feeding remains were noted (see section 4.3 for locations).

The age of the droppings varied from fresh (~1mths) to old (~2yrs). Samples were collected for DNA analysis. This analysis confirmed the presence of whiskered bats and common pipistrelle bats within the building. DNA results are available in Appendix 3.

During the survey, one unidentified bat was recorded in a crevice feature behind timbers on the east gable end. Due to its position it could not be reached for inspection and identification, but the DNA sample returned as whiskered bat was taken from directly below this individual. It is considered likely that this bat was a whiskered bat.

A full internal and external inspection recorded no evidence of nesting birds. No further surveys are required regarding nesting birds.

4.2 Phase 2 bat surveys

The full results for each survey are summarised below. On each survey the surveyors watched potential access points for bat emergence or re-entry. The surveys were undertaken by lead ecologist Richard Bates, licence ref: 2017-30400-CLS-CLS and assisted by Mike Bates. Equipment used during the survey included Echometer Touch 2 bat detectors with iPad/Android recording tablets and one Nightfox Corsac HD Night Vision binoculars. All surveys were undertaken in suitable conditions and in line with guidance available in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).

4.2.1 Dusk emergence surveys

Dusk on 15th August 2023

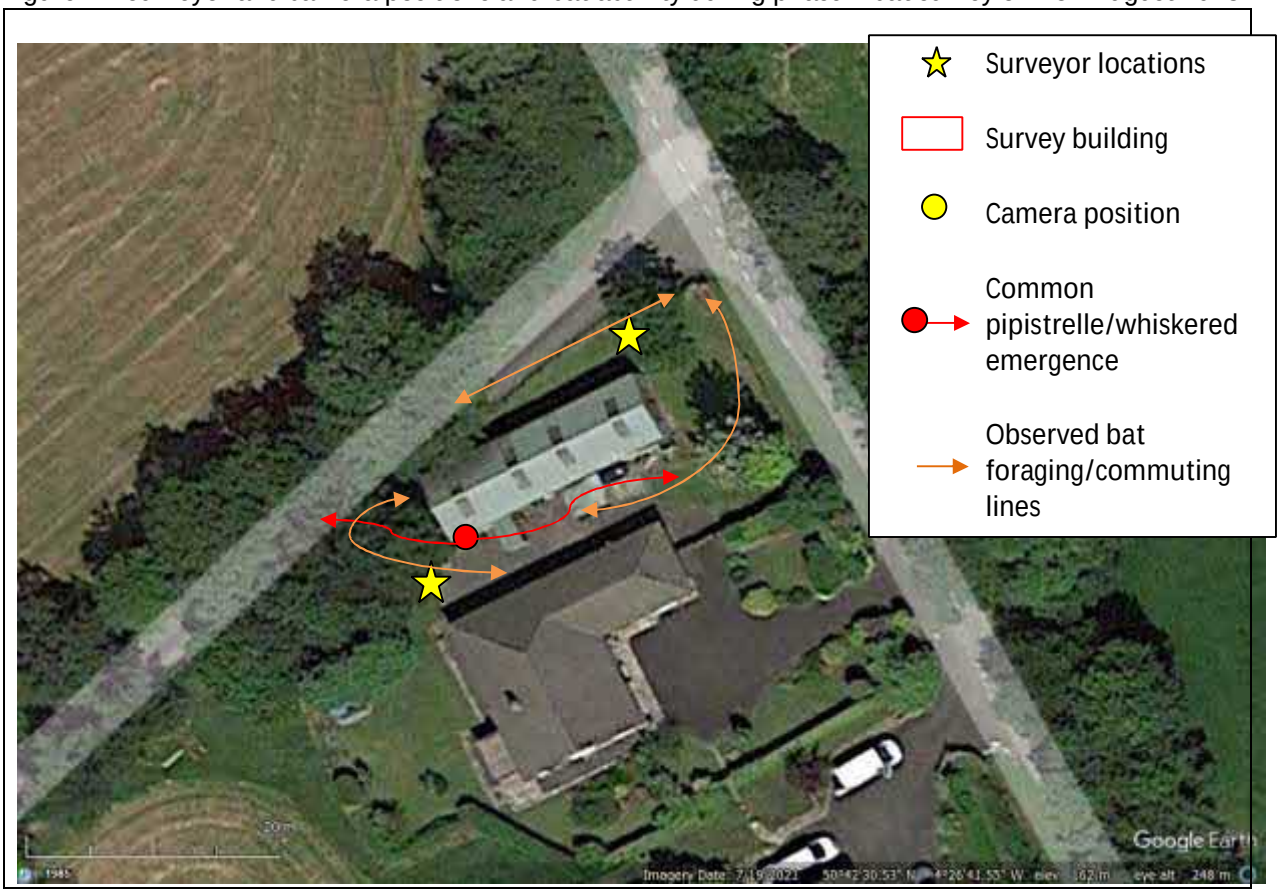
Building activity:
During the survey one common pipistrelle bat and one whiskered bat were recorded emerging from the identified access point. These bats were observed emerging from the eaves of the southwest corner at approximately 9:04pm and 9:07pm respectively, 24 and 27 minutes after sunset. Both bats commuted along the barn before foraging around the garden and nearby lane. No other bats were recorded emerging during the survey.

Photograph 3– Area of common pipistrelle and whiskered bat emergence and flight lines on 15th August 2023.

General activity:
Regular foraging activity by individual common pipistrelle bats was recorded throughout the survey. This was mostly located along the garden boundaries and around the outbuilding. Occasional individual soprano pipistrelle passes were also recorded.

Additionally, several myotis species pass - believed to be whiskered bat - were recorded along the north boundary of the site from 9:37pm until 9:46pm. One noctule bat pass was recorded earlier in the evening at 9:06pm.

Figure 1 – Surveyor and camera positions and bat activity during phase 2 bat survey on 15th August 2023.



Dusk on 5th September 2023

Building activity:

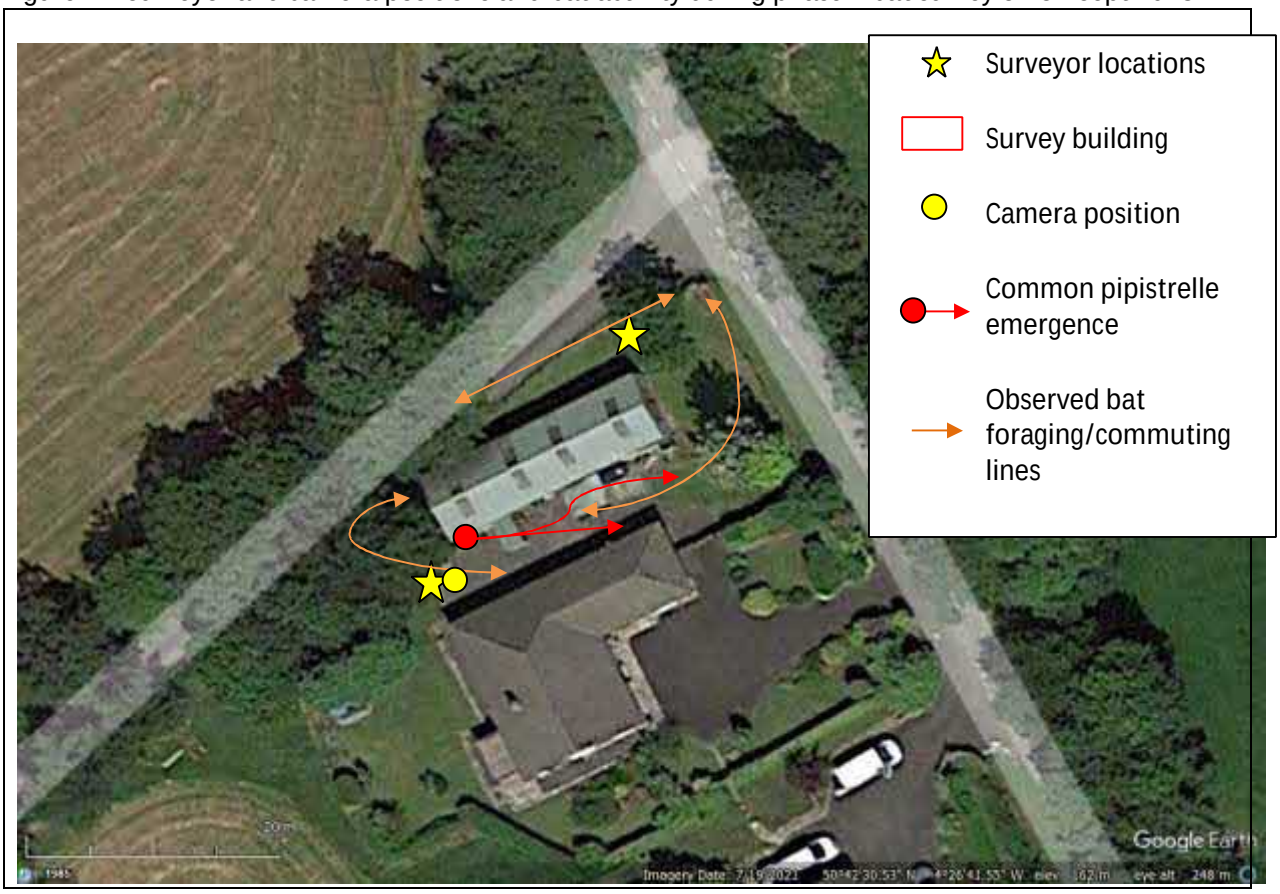
A total of two common pipistrelle bats were observed emerging from the same identified roost at the eaves of the southwest corner of the building. The first bat emerged at 8:14pm and the second bat at 8:15pm; sunset was at 7:56pm. No other bats were recorded emerging from the structure.

General activity:

Overall, bat activity recorded during the second survey was comparable to the activity recorded during the first survey. Individual common pipistrelle bats were recorded foraging along the garden boundaries with occasional foraging passes around the house.

During the survey one myotis bat pass was recorded on the north boundary at 9:54pm, 51 minutes after sunset. Two commuting passes by greater horseshoe bats were recorded on the south boundary at 10:10pm and 10:13pm. Individual serotine (Eptesicus serotinus) bat passes were also recorded at the site.

Figure 2 – Surveyor and camera positions and bat activity during phase 2 bat survey on 5th Sept 2023.



4.2.2 Summer static detector survey

One Anabat Express static detector was deployed at the site from the 15th – 19th August 2023. The detector was set to record bat activity detected during night-time hours.

Observations from the phase 1 building survey noted evidence of a lesser horseshoe roost within the barn. Observations from the phase 2 emergence surveys suggest the roost is not a day roost for lesser horseshoes and that no other bat roosts are present. The static detector survey confirmed the presence of lesser horseshoe bats and the data suggests that the roost is a night roost used by individual lesser horseshoe bats. Lesser horseshoe bats were recorded on four of the six overnight recordings, with the timing of calls on two nights suggesting a night roost is present. No other species of bat was recorded.

A description of the static survey results is presented in Table 4 below:

Table 4 – Summer static detector survey results at Trevenn, Clubworthy

Detector location	Date	Min. Night-time temp °C	Bat species and number of calls		Comments
			Common pipistrelle	Whiskered /Myotis	
Inside outbuilding	15th Aug	13°C	16	5	All calls for both species were centred around the dusk emergence period, with occasional calls by common pipistrelle recorded around 1am.
Inside outbuilding	16th Aug	13°C	33	6	All calls for both species were centred around the dusk emergence period and briefly before dawn, with occasional calls by common pipistrelle recorded around 1-2am.
Inside outbuilding	17th Aug	16°C	21	10	All calls for both species were centred around the dusk emergence period and briefly before dawn, with occasional calls by common pipistrelle recorded around 1-2am.
Inside outbuilding	18th Aug	14°C	28	0	All calls for both species were centred around the dusk emergence period and briefly before dawn. No myotis calls were detected.
Inside outbuilding	19th Aug	14°C	47	6	All calls for both species were centred around the dusk emergence period, with occasional calls by common pipistrelle recorded around 1am.
Total			145	27	

4.3 Bats – Commuting and Foraging

Nearby hedgerows and built structures (fences and walls) along the site boundaries and neighbouring properties were assessed as having moderate foraging and commuting opportunities for bats, based on guidance summarised in Table 2. However, the proposed development is for a small scale conversion of the building and will be designed to be complementary to its surroundings. All boundary features will remain intact and fully accessible for foraging bats both during and post-construction.

Recommendations have been included in section 5 to minimise disturbance to foraging and commuting bats. Provided these recommendations are adopted, it is unlikely that the proposed development will have any significant impact on bat foraging or commuting.

Survey Constraints

No significant constraints were noted and the survey results are considered to be valid.

4.4 Location of internal bat evidence

Small collection of concentrated droppings, confirmed as whiskered bat.

Individual bat droppings stuck to wall around identified access point. DNA analysis confirms common pipistrelle bats.

4.5 Summary of findings

The site's location in a mostly rural location makes it an attractive location for bats. The presence of agricultural fields, mature hedgerows and wooded streams in all directions provides ample foraging and commuting opportunities to support bats. Indeed, a search of local records returned multiple species in the vicinity of the site.

A thorough search of the building recorded evidence of common pipistrelle and whiskered bats and suitable access points for these species. Subsequent phase 2 bat surveys established that this is likely to be a day roost for individuals of both species, with common pipistrelles in low numbers on a regular basis and whiskered bats present less frequently.

Based on the information available, an assessment of the conservation value of the identified roosts has been provided in table 5 below:

Table 5 – Conservation value of identified roosts

Common name	Species	Roost type	Estimated numbers	Conservation Value
Whiskered	Myotis mystacinus	Day roost	1	Individuals of a rarer species in England (Wray et al., 2010), low conservation value (English Nature, 2004) and of county level importance (Wray et al., 2010.)
Common pipistrelle	Pipistrellus pipistrellus	Day roost	2	Individuals of common species in England (Wray et al., 2010), low conservation value (English Nature, 2004) and of local level importance (Wray et al., 2010).

As day roosts for individual whiskered and common pipistrelle bats are present, a European Protected Species (EPS) licence from Natural England will be required for the proposed works.

Current plans for the site include the conversion of the building. This conversion will result in the loss of the existing roosts and potentially disturb, injure or kill any bats that may be present. Pre-construction inspections of the building and supervised dismantling of specific areas by hand will be required to minimise the direct risk to bats. Appropriate mitigation measures will be necessary to compensate for the lost roosts.

These and other activities, such as a 'tool-box' talk to contractors and a post-construction compliance check, will be required under the EPS licence from Natural England. This process is outlined in section 5 below.

5. Recommendations

5.1 Bats

The proposed development at Trevenn, Clubworthy, includes the conversion of the outbuilding structure. This proposal will result in loss of the identified bat roosts and poses potential disturbance and physical risks to any bats that are present. As the proposed development will directly impact on the identified roosts, the following will be required:

Natural England licensing

The proposed works will require a European Protected Species (EPS) licence from Natural England. Bats and their roosts are protected under current legislation and an EPS licence is required for all works that would result in the modification, destruction or disturbance to a known bat roost as well as works that would affect bats themselves.

The application process will use the findings of the phase 2 surveys to present an appropriate mitigation plan that allows the development to continue without any detrimental effect on the bat population or their ability to roost on site. The EPS licence can be applied for once full planning or building consent has been granted. Please note, Natural England take at least six weeks to determine a licence application and this will need to be factored into any proposed timescale for the development.

5.1.2 Pre-works inspection

Immediately prior to any works being undertaken, two Schwegler 2F bat boxes will be installed in a suitable location under the ownership of the client. These boxes will serve as temporary roosting opportunities whilst licensed works are carried out as well as a safe location to place any bats discovered during the work.

It will be positioned a minimum height of 3m from ground level in a sheltered location on a south facing aspect. It will also have a clear, uncluttered flight path to the entrance point. The box will be a suitable distance from the works area to prevent disturbance and will provide a good temporary roost for bats.

A pre-works survey of the building will be undertaken by a licensed bat worker to check for presence of bats. If bats are found during the survey, a licensed bat worker will exclude the bats using best practice methods and in accordance with the Natural England licence. This may include natural dispersion using manipulation of the physical or environmental conditions within the roost.

Once the interior of the barn is declared free of bats, identified access points (any eaves access points, around window frames and gaps in doorways etc.) will be blocked to prevent re-entry.

If a bat is discovered at other, unsupervised times, work will cease immediately and the licensed ecologist will be called for advice. This advice will include leaving the bat to disperse of its own accord or wait for the licensed handler to arrive and move the bat. Builders and contractors are explicitly forbidden from handling bats.

5.1.3 Timing of works

As individuals of a rarer bat species and multiple bats of a common species are known to be present during the summer, timing restraints may be required (English Nature, 2004). Final timing restrictions, if any, will be agreed with Natural England during the EPS licensing process. However, where possible all proposed works that affect the roost will be undertaken outside of the summer active period (May – August). This will minimise the risk of disturbance to bats.

5.1.4 Proposed mitigation

The proposed development will result in the loss of roosts for common and rarer crevice dwelling bat species. The loss of these roosts will be compensated for with the following:

Day roosts for common pipistrelle bats

To compensate for roosting opportunities, a minimum of one Schwegler 2FR bat tube (or other suitable bat tube) will be installed in the wall of the building on the south aspect. Please see Appendix 4 for details of this tube and location.

The tube leads directly to suitable crevice spaces inside. If multiple tubes are used, the tubes are designed with removable sections to allow access between adjacent tubes – these sections will be removed in order to link the tubes together and provide full access for bats.

These tube(s) will be located in a suitable sheltered position on the existing building, close to the location of the lost roosts. The tube(s) will also be located close to commuting pathways (i.e. hedgerow vegetation along the rural roads). This will increase the likelihood of the tube(s) being discovered and adopted.

No external or internal lighting will illuminate these tubes, either directly or indirectly. To achieve this, any lighting plan for the development will follow the guidance laid out in section 5.2 below.

Day roosts for whiskered bat

To compensate for lost summer day roosting opportunities, one Schwegler 2FR bat tube (or other suitable bat tube) will be installed in the wall of the building on the south aspect. Please see Appendix 4 for details.

These tube will be located in a suitable sheltered position on the existing building, close to the location of the lost roosts. The tube will also be located close to commuting pathways (i.e. hedgerow vegetation along the rural roads). This will increase the likelihood of the tube(s) being discovered and adopted.

No external or internal lighting will illuminate these tubes, either directly or indirectly. To achieve this, any lighting plan for the development will follow the guidance laid out in section 5.2 below.

5.1.5 Post-construction monitoring

The proposed development will affect roosts for a rarer bat species. The advice of the Bat Mitigation Guidelines (English Nature, 2004), suggests one to two years of post-construction monitoring is preferred in these circumstances to judge whether the mitigation provided has been successful. However, the final stipulation for post-construction monitoring will be agreed with Natural England during the licence application.

Post-construction monitoring that is required will involve an inspection of the mitigation measures, including accessing the new loft void, followed by an emergence survey of the mitigation.

5.2 Bats – Foraging and commuting

Bats are sensitive to artificial lighting, which can draw insect prey away from potential foraging areas while simultaneously discouraging bats from foraging and disrupting commuting routes. Currently a lighting plan is unavailable for the development. However, in order to preserve commuting and foraging opportunities, all new exterior lighting will incorporate the following (where applicable) to minimise the potential for light disturbance:

Work on site will be limited to daylight hours only. No artificial use of lighting will be used for the proposed development during the hours of darkness.

External lighting used to illuminate any building entrances will use motion sensors. The use of sensors will reduce the amount of time the lights are on to only when needed.

All external lights will be angled downwards and away from the site boundaries. The spread of light from these sources will be minimised by using hoods or cowls to limit light spill to below the horizontal, in line with guidance available in Landscape and urban design for bats and biodiversity (Gunnel, Grant, & Williams, 2012).

Any required footpath lighting will consist of ground level bollard-style lighting or poll mounted lighting where an incorporated hood will direct the light downwards and away from the nearby foliage and commuting features. For either design, lighting will be restricted to providing 3 lux or less at ground level, in line with guidance available in Bats and Lighting in the UK: Bats and the Built Environment Series (Bat Conservation Trust, 2008).

Where available, external lighting will incorporate LED luminaires or narrow spectrum bulbs that emit minimal ultra-violet light, as recommended in guidance from the Bat Conservation Trust & Institute of Lighting Professionals (2018) and the Bat Conservation Trust (2008) respectively. This will avoid attracting insects to lit areas, maintaining the availability of those insects for foraging bats.

6. References

Bat Conservation Trust (2008). Bats and Lighting in the UK: Bats and the Built Environment Series. Bat Conservation Trust.

Bat Conservation Trust & Institute of Lighting Professionals (2018). Bats and Artificial Lighting in the UK. https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting

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Appendix 1: Legislation (summary)

Wildlife Protection legislation

This appendix details the legislation relevant to the protection of species and habitats. It also details the relevant policies within national, regional, and local planning policy.

National Planning Policy Framework (2018)

The National Planning Policy Framework (NPPF) is the Government's vision for biodiversity in England and is considered by local councils during all planning applications where development is proposed. The NPPF has a broad aim that any construction, development or regeneration proposals should maintain and enhance biodiversity, with the aim of securing biodiversity enhancements for all developments in order to facilitate sustainable development.

Biodiversity Action Plans (BAPs): BAPs set out policy for protecting and restoring priority species and habitats as part of the UK's response as signatories to the Convention on Biological Diversity. BAPs operate at both a national and local level with priority species and habitats identified at a national level and a series of Local BAPs that identify ecological features of particular importance to a particular area of the country. The requirement to consider and contribute towards BAP targets was strengthened through the Countryside and Rights of Way (CRoW) Act 2000. Although now superseded by other legislation, the lists drawn up under the BAPs are still valuable reference sources on local and national wildlife priorities.

Natural Environment & Rural Communities (NERC) Act (2006)
The NERC Act 2006 amends the above mentioned CRoW Act, obliging local authorities to include biodiversity considerations in their duties, including in consideration of planning applications. Under Section 41 of the Act, this consideration is based on lists of organisms and habitat types deemed to be of principal importance to in conserving biodiversity. These lists are primarily based on lists created for the UK and local authority BAPs.

Mammals:

Otters, dormice, water voles, and all bat species are fully protected under section 9 (5) of the Wildlife and Countryside Act 1981 (as amended). According to this act it is an offence to:

Intentionally capture, kill or injure one of these animals
Intentionally or recklessly damage, destroy or obstruct access to any structure or place used by one of these animals for shelter or protection
Intentionally or recklessly disturb an animal whilst it is using this place
sell, offer for sale or advertise for one of these animals live or dead

Designated as European Protected Species' otters, dormice, and all bat species receive additional protection from the Conservation of Habitats and Species Regulations 2010, under Schedule 2 which implements the EC Directive 92/43/EEC in the United Kingdom. In accordance with this act, it is an offence to:

Deliberately capture or kill a European Protected Species
Deliberately disturb a European Protected Species

Damage or destroy the breeding site or resting place of a European Protected Species

The greater and lesser horseshoe bats, barbastelle and bechstein's bats, are also listed under Schedule 2 of the Conservation of Habitats and Species Regulations. Areas which support populations of these species can therefore be considered for designation as a Special Areas of Conservation (SACs).

Birds:

Please Note: All breeding birds and their nests are protected under the general protection of Section 1 of the Wildlife and Countryside Act, 1981 as amended. This makes it an offence to disturb breeding birds.

Appendix 2: Additional Site Photographs

Photograph 1 – View of north side of the building.

Photograph 2 – View of the south aspect.

Photograph 3 – View of the crevice feature containing unidentified bat at east gable end.

Photograph 4 – Example view of droppings around structure.

Photograph 5 – View of feeding remains and individual scattered droppings.

Photograph 6 – View of area of access beneath barge board.

Appendix 3: DNA analysis results

WARWICK
THE UNIVERSITY OF WARWICK

CeoWarwicker
Ceological Forensics

28 July 23

Re: Identification Results for Richard Bates, Devon & Cornwall Ecology

Job number 19917, received 11 July 2023
Sample labelled: Trevem inside
PCR amplification successful. DNA sequence:
AGATGCCTAATAGGGACCCAAAATTTCATCATGCTGAAATGTTTGATGGAGCTGGTA
GATCAATGAATGAGTTATTGATGATTTTGATCAGGGGGTGGGACTTTCGAATGTTGG
TCAT

Phylogenetic analysis identification: *Pipistrellus pipistrellus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

WARWICK
THE UNIVERSITY OF WARWICK

CoeWarwicker
Ecological Forensics

22 July 23

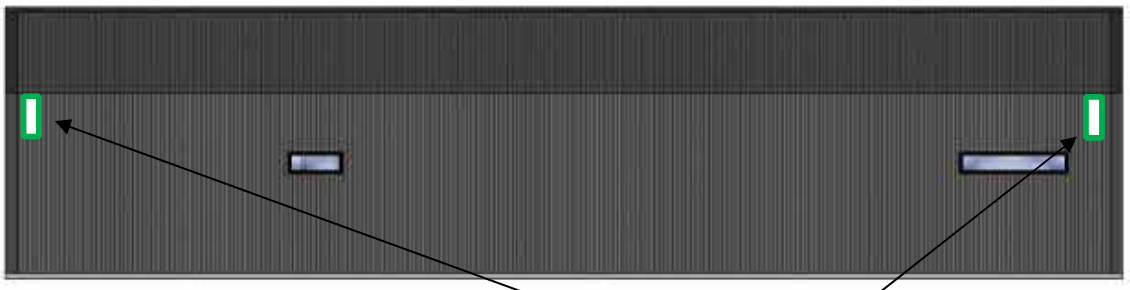
Re: Identification Results for Richard Bates, Devon & Cornwall Ecology

Job number 19918, received 11 July 2023
Sample labelled: Trevem outside
PCR amplification successful. DNA sequence:
GAGATCCGAAATTTCATCAAGATGAGATATTTGATGGGGTAGGAAGGTCGATAAATG
AGCTATTAATAATTTTTACTAAGGGGTGGGACTTTCGAATGTTGGTCAT

Phylogenetic analysis identification: *Myotis mystacinus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Appendix 4: Bat mitigation measures



Proposed South elevation

Example of Schwegler 2FR bat tube, designed to be incorporated into wall. A minimum of two will be installed on south facing aspect for warmth and to replicate original roosting opportunities. Requires no maintenance and can be painted/rendered.