# BAT PRESENCE/ABSENCE SURVEYS OF:

# GARAGE AT CHARLOTTE HOUSE
# GARRISON LANE
# HUGH TOWN
# ST MARY'S
# ISLES OF SCILLY
# TR21 0JD

*Client: Mr Rob Green*

*Our reference: BS39-2020PAS*

*Report date: 14th May 2021*

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*Report peer reviewed: Sarah Mason.*

*Report signed off: Sarah Mason.*

***REPORT ISSUED IN ELECTRONIC FORMAT ONLY***

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# Contents

## Non-Technical Summary

- On 8th December 2020, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of a detached garage at Charlotte House, Garrison Lane, Hugh Town, St Mary's, Isles of Scilly, TR21 0JD (BS39- 2020). These surveys were undertaken to establish baseline conditions, determine the importance of any ecological features within and around the survey areas and to establish the actual or potential use of the building by bats to help inform the determination of a future planning application.
- These surveys concluded that the garage at Charlotte House had low potential to support roosting bats. One presence/absence survey was recommended, and the results of this survey are outlined in the Presence/Absence (PAS) report.
- A dusk emergence survey conducted on 13th May 2021 did not identify any bats emerging from potential roosting sites associated with the building but did identify large numbers of bat contacts related to commuting and foraging behaviour in and around the large drystone walls adjacent to the development.
- Both the PEA/PRA and PAS reports should be considered together to provide a comprehensive assessment of nature conservation issues at the site.
- The results confirm the **likely absence of bats** using Charlotte House Garage as a roost
- The recommendations from the PEA/PRA along with this report, suggest **no further surveys and no requirement to obtain an EPS license.**
- The implementation of avoidance and enhancement measures recommended in this report could sufficiently ensure that the conservation status of bats on St Mary's is not negatively impacted.
- **This report is sufficient to support the proposed planning application.**

# 1.0 Introduction

## 1.1 Background

A Preliminary Roost Assessment report (BS39-2020) dated 8th December 2020 identified that the building under consideration provided low roosting potential for bats. Additional presence/absence surveys were recommended to meet best practice guidance to support a future planning application. This report outlines the results of this additional survey.

## 1.2 Survey Objectives

The objectives of this Presence and Absence Survey (PAS) report, is to provide further ecological information to support the planning proposal by:

- Ascertaining if roosting bats are present at the application site.
- To identify the location of these bat roosts (including exit/entry points)
- Subjecting this information (and the information from the PEA and PRA) to evaluation and impact assessment
- To provide advice on the potential for contravention of legislation/policy
- To provide recommendations on any further actions needed (i.e., further surveys, licensing, mitigation, or enhancement)

## 1.3 Surveyor details

The survey was undertaken by Darren Mason BSc (Hons) of the Isles of Scilly Wildlife Trust and with the assistance of Rhianna Pearce. Darren has undertaken professional Bat Licence Training and holds a Natural England WML-A34-Level 2 (Class 2 License); registration number: 2020-46277-CLS-CLS which permits him to survey bats using artificial light, endoscopes, hand, and hand-held static nets.

# 2.0 Methodology

## 2.1 Bat Dusk emergence survey

The objective of the dusk emergence surveys was to detect active bat use of the site and identify any exit locations being used around the building. Survey effort was concentrated on areas of the site where suitable features or bat field signs were noted from the PRA. The survey involved.

- Starting the survey 15 minutes before sunset and continuing for approximately 1.5-2hours after[1]
- Identification of bat species primarily using ultrasound characteristics. To aid identification flight and habitat characteristics were also noted (where possible) to determine the species.
- Identifying exit locations of bats by standing at different vantage points around the building that offered visual contact with any potential exit point previously recorded. Surveyors stood no more than 50m apart, or away from the building (see Fig 1 for location of surveyors).

## 2.2 Equipment

The following equipment was used for the dusk emergence survey at the site:

- Anabat Express (Frequency Division) static bat recorder
- Elekon Batscanner Stereo Hetereodyne
- Elekon Batscanner Heterodyne
- Magenta Bat 4 Bat Detector
- Bestguarder WG-50 Night vision camera

Sound recordings were analysed using Anabat Insight software (version 1.9.2) to confirm surveyors' identification of species.

### 2.3 Survey Limitations

Surveys carried out during a specific season can only provide information on bat presence at that particular time, as bats are highly mobile in nature and may only use buildings at certain times of the year that favour a particular part of their roosting, maternity, and hibernating requirements.

## 3.0 Results

### 3.1 Weather conditions, temperatures, and timings

| Survey Information: | Start and End Times: | Conditions (Start): | Conditions (End): |
|---|---|---|---|
| **Dusk emergence:** 11/5/21 | Start: 20:45<br>Sunset: 21:00<br>End: 22:15 | Temp: 13.5$^0$C<br>Humidity: 69.5%<br>Wind speed: mph – 8WSW<br>Cloud cover: 0%<br>Rain: none | Temp: 6.5$^0$C<br>Humidity: 86.5%<br>Wind speed: mph -7WSW<br>Cloud cover: 0%<br>Rain: none |
| | **Surveyors** | | |
| | 1. Darren Mason<br>2. Rhianna Pearce | Notes: Light Lux 2 at 21:27 | |

*Table 1. Site conditions for the dusk emergence survey 13-5-21*

*Photo 1. Surveyor location for the dusk emergence survey 13-5-21*

### 3.2 Dusk emergence roost survey results

During the dusk emergence survey no bats were seen exiting or leaving the development from those potential roost features identified during the PEA/PRA, or any other area of the building affected by the planning application proposal. All species record were Common Pipistrelle (*Pipistrellus pipistrellus*).

Bat activity levels were deemed high with 33 bat contacts recorded in total, the first 21 minutes after sunset, well within the normal temporal parameters of this species[2,3]. Twenty-eight of these contacts were recorded by both surveyors simultaneously, with many of these contacts including multiple feeding buzzes. Discussion afterwards revealed that surveyor 2 had visually recorded multiple bat passes that came from the north, before proceeding to circle and feed in and around the large drystone walls immediately adjacent to the development. This behaviour was first recorded at 21:29pm and continued right through to the end of the survey at 10.15pm, when the temperature was recorded as $6.5^{0}$C, temperatures below which bats would typically fly as flight is energetically demanding, particularly if insect levels are low. It is assumed that the drystone walls retained the heat of the day, which in conjunction with the area of vegetation below created a suitable micro-climate for invertebrates which the bats subsequently took advantage of. For all bat contacts see Appendix A.

### 3.3 Summary

The result of the dusk emergence survey has confirmed the likely absence of bats at Charlotte House garage. However, the results can only be based on presence/absence at a particular time as bats are highly mobile in nature and may use the building at other times of the year. Avoidance measures set out under Section 5 will help to reduce the probability of committing an offence if bats were found during the demolition phase of the proposed works.

## 4. Evaluation of Results

To identify which ecological features are important and which could potentially be affected by the proposed project, an evaluation of their importance for example, in a geographical context, degree of scarcity or level of protected status needs to be undertaken[5]. The table below outlines those features identified as important, the nature conservation legislation relevant to those features and an assessment of the level of impact from the proposed development on those features.

| Ecological Feature | Relevant Legislation | Evaluation (of importance) | Mitigation Hierarchy | Impact Level |
|---|---|---|---|---|
| **Bats** | CHSR, W&CA | Local | A, & E | Low |
| | **Impact to roost site:** Confirmed likely absence of a bat roost at Charlotte House garage suggests that the impact to a roost site at this location is low. However, if a roost were located this would have a negative effect on the population status of Common Pipistrelle bats on the Isles of Scilly. Therefore, consideration and due care must be considered and undertaken at the following stages:<br>**Impacts to bats:**<br>**Demolition:** – Undertaking Reasonable Avoidance Measures (RAM) can reduce the likelihood of negatively effecting the local population status and minimise the probability of committing an offence with respect to bats and their roosts if measures are adhered to.<br>**Construction:** – A positive impact on the local population of Common Pipistrelle bats may result through the incorporation of new roost(s) in the new building[6] and retaining the vegetation below the drystone walls immediately west of the garage or enhancing the area with bat friendly planting. | | | |
| Key to Legislation and Mitigation Hierarchy | | | | |
| CHSR – Conservation of Habitats and Species Regulations 2017[7] - http://www.legislation.gov.uk/uksi/2017/1012/made<br>W&CA – Wildlife & Countryside Act 1981 (as amended)[8] - http://www.legislation.gov.uk/ukpga/1981/69/contents<br>HRA – Hedgerow Regulations Act 1997[9] - https://www.legislation.gov.uk/uksi/1997/1160/made<br>**A** – Avoid, **M** – Mitigate, **C** – Compensate, **E** – Enhancement | | | | |

# 5. Recommendations and Mitigation

The recommendations in this section are provided as information only and specialist legal advice may be required. If works are delayed for more than one year, then re-assessment may be required.

## 5.1 Survey constraints

The surveys were undertaken at an appropriate time of year, during the main summer active season.

## 5.2 Further survey requirements

**No further surveys** are recommended with regards to the proposed development – it is considered that this report, alongside the PEA/PRA (BS39) constitute a comprehensive ecological baseline from which to assess the impacts of the application.

## 5.2 EPS Licence requirement

For any development that is likely to commit an offence (or offences) in respect to a European Protected Species (EPS) i.e., bat, or their habitat, a licence will be required. In this instance based on sufficient survey work **no licence is required**. If, in the unlikely event a bat was found during the demolition phase of the project, Reasonable Avoidance Measures (RAM) must be followed and will determine any further action, such as licensing if necessary.

## 5.4 Planning Recommendation(s)

The information gathered in the PEA/PRA (BS39-2020) and this report is sufficient to support a planning application with regards to protected species in accordance with relevant best practice guidelines.

It is considered that the impacts of the proposed works on protected species can be mitigated sufficiently to ensure that the conservation status of Common Pipistrelle on St Mary's is not negatively impacted. The mitigation outlined in Section 5.5. would represent appropriate measures.

It is recommended that planning permission be granted if compliance with the recommendations in Section 5.5 of this report is conditioned.

## 5.5 Mitigation Proposals

### 5.5.1 Avoidance (A) – Bats

As there is a very low risk that bats may roost within the building, prior to demolition, precautions should be taken to reduce the probability of committing an offence. By undertaking Reasonable Avoidance Measures (RAM), if affected RAM should include:

i. When roofing works are planned these should avoid the main breeding and mating season of *Vespertilionidae* bats, work should typically take place between the 1st November and 1st May inclusive, however the months of **November to February should be avoided where possible** as this is when bats enter a time of reduced activity and torpor which makes disturbance impacts more significant.

ii. Ensure all workers on site (including sub-contractors) are made familiar with bat legislation and agree to work in accordance with and fully follow best practice measures.

iii. Carry out prior to demolition careful checks of any cracks/crevices and cavities in or on the building. Signs of usage include bat droppings, dis-colouration or polishing of access points where bats rub against them, urine stains and a lack of cobwebs, particularly if other crevices around them have plenty.

iv. Individual bats may be found in/under; cladding, between timber boards, between corrugated sheeting, in soffit boxes, behind lead flashing and sometimes just clinging to timber beams around joins as well as other areas. When any of these are removed, please do so carefully, lifting outwardly, and checking for bats continually. If in doubt, consult a licensed bat worker.

v. Try to minimise any dust generated from demolition works from entering off-site buildings and gardens.

vi. In the unlikely event that a bat is found please see below:

1. At no point should a worker handle a bat. Untrained handling may cause undue stress and injury to the bat, and if bitten may expose the worker to rabies-related European Bat Lyssavirus
2. Where possible replace any covering without damaging the bat, then halt works and contact **Natural England** (Tel: 0845 601 4523), or the **Bat Conservation Trust Helpline (**0845 1300 228), or **IoSWT** (01720 422153) for advice.
3. Any bats that go to ground should be covered with a box and left alone until a licensed bat worker arrives to assess the condition of the bat.
4. If the bat attempts to fly at any point allow it to do so. Preventing natural behavior will cause unnecessary stress and may cause injury. Attempt to see where bat goes. If the bat returns to the building, halt works and report the escaped bat to the local bat worker.

### 5.5.2 Enhancement (E) – Bats

The Isles of Scilly have the most southern population of Common Pipistrelle (*Pipistrellus pipistrellus*) bats in the United Kingdom. The islands also hold small populations of Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Brown Long-eared Bat (*Plecotus* auritus) both UK Biodiversity Action Plan (BAP) priority species and holds records for the rare Nathusius Pipistrelle (*Pipistrellus nathusii*). Any loss of roosting, commuting or foraging sites could have a detrimental effect on these species distributions as a whole and cause a net loss in biodiversity on the islands.

Each local planning authority in England and Wales has a statutory obligation under Part 3 Section 40 of the Natural Environment & Rural Communities Act 2006[10] (NERC 2006) to have due regard for biodiversity when carrying out their functions and under Section 15 paragraph 170(d) of the NPPF 2019[11], all planning policies and decisions shall contribute to and enhance the natural and local environment by providing net gains in biodiversity. **Therefore, to assist in meeting these obligations the following suggestion should be undertaken:**

i. Erect one free-standing 'Kent' style bat box developed for crevice-dwelling species (See Appendix B for supplier details) immediately below the fascia on the east aspect of Charlotte House.
ii. And retain the drystone walls and the vegetation below to maintain the existing micro-climate.
iii. Or enhance the area immediately west of the garage with bat-friendly planting to enhance the area for feeding opportunities (see Appendix C for a list of bat-friendly plants).

## 6. Bibliography


1. Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edition). The Bat Conservation Trust

2. Rydell, J. et al. (1996). Timing of Foraging Flights of Three Species of Bats in Relation to Insect Activity and Predation Risk. Oikos. Vol 76. No.2. p243-252

3. Jones, G. and Rydell, J. (1994). Foraging strategy and predation risk as factors influencing emergence time in echolocating bats.

4. Hughes, P.M., Rayner, J.M.V. and Jones, G. (1995). *Ontongeny of 'true' flight and other aspects of growth in the bat Pipistrellus.* Journal of Zoology 236: p291-318

5. CIEEM. (2016). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal (2nd edition). Chartered Institute of Ecology and Environmental Management, Winchester.

6. Mitchell-Jones, A.J. (2004). Bat mitigation guidelines. English Nature.

7. H.M.S.O. (2017). *The Conservation of Habitats and Species Regulations.* London.

8. H.M.S.O. (1981). *The Wildlife and Countryside Act 1981* (as amended). London.

9. H.M.S.O. (1997). *The Hedgerow Regulations 1997. London*

10. H.M.S.O. (2006). *The Natural Environment and Rural Communities Act 2006*. London

11. Ministry of Housing, Communities & Local Government. (2019). National Planning Policy Framework. OGL

12. BCT (2015). "*Encouraging Bats. A Guide for Bat Friendly Gardening and Living*"

# APPENDIX A – BAT CONTACTS SURVEY TABLE

| **Date:** | **13/5/21 – Dusk emergence survey** | | | |
|---|---|---|---|---|
| **Survey Type:** | **Surveyor 1** | **Surveyor 2** | **Surveyor 3** | **Night vision camera** |
| **Location:** | Unseen, unseen, S to N, unseen, N to S to N, unseen, S to S to N, N to S, unseen, unseen, unseen, unseen, unseen, unseen, unseen, unseen, unseen, unseen, unseen, and unseen | Unseen, unseen, unseen, S to N, unseen, courtyard, courtyard, courtyard, courtyard, courtyard, unseen, courtyard, courtyard, courtyard, courtyard, courtyard, N to S, unseen, unseen, courtyard, unseen, unseen, courtyard, unseen, courtyard, courtyard, courtyard, unseen, unseen, unseen, courtyard, courtyard | | |
| **Exit/Entry point:** | None recorded | None recorded | | |
| | | | | |
| **Time(s):** | 21:21**; 21:25 (fb); 21:28 (fb); 21:30 to 21:36 (fb);** 21:37 to 21:39 (fb); **21:40 (fb) to 21:42 (fb); 21:48; 21:50 (fb); 21:51;** 21:52 (sc); **21:53; 21:55 to 21:57 (fb);** 21:58 (sc); **21:59; 22:01 to 22:06 (fb); 22:10 to 22:13 (fb)** and 22:14 | 21:22; 21:23; **21:25**; **21:28**; **21:29 to 21:36**; 21:38 to **21:40; 21:41, 21:42, 21:48; 21:51 to 21:55; 21:57; 21:59; 22:01 to 22:04; 22:05;** 22:08; **22:11, 22:12** and 22:16 | | |
| **Species of bat:** | Common Pipistrelle | Common Pipistrelle | | |
| **Roost present:** | None confirmed | None confirmed | | |

*(fb) – feeding buzz; (sc) – social calls*

# APPENDIX B – SUPPLIERS

1. Natural History Book Service
   1-6 The Stables
   Ford Road
   Totnes
   Devon, TQ9 5LE
   Tel: 01803 865913
   Email: customer.services@nhbs.com
   Website: https://www.nhbs.com/

2. Habibat
   Tel: 01642 724626
   Email: http://www.habibat.co.uk/contact
   Website: www.habibat.co.uk

3. Dreadnought Tiles
   Dreadnought Works
   Brierley Hilly
   West Midlands, DY5 4TH
   Tel: 01384 77405
   Email: sales@dreadnought-tiles.co.uk
   Website: www.dreadnought-tiles.co.uk

4. Wildlife & Countryside Services
   Covert Cottage
   Pentre Lane
   Rhuddlan
   North Wales, LL18 6LA
   Tel: 0333 9000927
   Email: support@wildlifeservices.co.uk
   Website: www.wildlifeservices.co.uk

5. Wildcare
   Eastgate House
   Moreton Road
   Longborough
   Gloucestershire, GL56 0QJ
   Tel: 01451 833181
   Email: sales@wildcare.co.uk
   Website: www.wildcare.co.uk

# APPENDIX C: Bat Friendly Planting

List of species taken from the Bat Conservation Trust Leaflet: "*Encouraging Bats. A Guide for Bat Friendly Gardening and Living*" (BCT 2015)[12]

*Plants marked * are hybrids or exotics that may be useful in the garden.*

| **Flowers for Borders** | **Flowering period** |
|---|---|
| *Aubretia | Spring to early summer |
| Bluebell | Spring |
| *Candytuft | Summer to autumn |
| *Cherry pie | Summer to autumn |
| Corncockle | |
| Corn marigold | |
| Corn poppy | |
| *Echinacea | |
| *Evening primrose | Summer to autumn |
| Field poppies | Summer |
| *Honesty | Spring |
| *Ice plant 'Pink lady' | Early autumn |
| Knapweed | Summer to autumn |
| Mallow | Summer to autumn |
| *Mexican aster | Summer to autumn |
| *Michaelmas daisy | Summer to autumn |
| *Night-scented stock | Summer |
| Ox-eye daisy | Summer |
| *Phacelia | Summer to autumn |
| *Poached egg plant | Summer |
| Primrose | spring |
| *Red valerian | Summer to autumn |
| Scabious | Summer |
| St John's wort | Spring |
| *Sweet William | Summer |
| *Tobacco plant | |
| *Verbena | Summer to autumn |
| *Wallflowers | Spring to early summer |
| Wood forget-me-not | Spring |
| Yarrow | Early summer |

| Herbs | Flowering period |
|---|---|
| Angelica | |
| Bergamot | Summer to early autumn |
| Borage | Spring to early autumn |
| Coriander | Summer |
| Fennel | Summer to early autumn |
| Feverfew | Summer to early autumn |
| English marigold | |
| Hyssop | Summer to early autumn |
| Lavenders | |
| Lemon balm | |
| Marjoram | Summer |
| Rosemary | Spring |
| Sweet Cicely | Spring to early summer |
| Thyme | Summer |

| Trees, shrubs, and climbers | Type |
|---|---|
| *Bramble | climber |
| Buddleia | shrub |
| Common Alder | tree (suitable for coppicing) |
| Dog rose | climber |
| Elder | tree (small) |
| Gorse | shrub |
| Hawthorn | tree (suitable for coppicing) |
| Hazel | shrub (suitable for coppicing |
| Honeysuckle (native) | climber |
| Hornbeam | tree |
| Ivy | climber |
| *Jasmine (night-scented) | climber |
| Grey Willow | tree (suitable for coppicing) |
| Rowan | tree |
| Silver birch | tree |