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BAT PRESENCE/ABSENCE SURVEYS OF:

RECULVER
LOWER STRAND
ST MARY'S
ISLES OF SCILLY
TR21 0PS

Client: Mr and Mrs Ward c/o Rob Green

Our reference: BS40-2020PAS

Planning reference: P/20/102

Report date: 9th June 2021

Author: Darren Mason BSc (Hons)

Report peer reviewed: Sarah Mason.

Report signed off: Sarah Mason.

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Non-Technical Summary

- On 8th January 2021, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of 'Reculver', Lower Strand, St Mary's, Isles of Scilly, TR21 0PS (BS40-2020) to establish baseline conditions, determine the importance of any ecological features within and around the survey area and to establish the actual or potential use of the building by bats to help inform the determination of planning application P/20/102.
- Two presence/absence surveys were recommended, and the results of these surveys are outlined in this Presence/Absence (PAS) report.
- A dusk emergence survey conducted on the 11th of May 2021 did not identify any bats emerging from potential roost sites associated with the building but did identify a small number of bats commuting in the general area of the development.
- A dawn re-entry survey conducted on the 8th of June 2021 did not identify any bats returning to potential roost sites associated with the building.
- The results confirm the likely absence of bats using Reculver 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.
- Both the PEA/PRA and PAS reports should be considered together to provide a comprehensive assessment of nature conservation issues at the site.
- Mitigation measures for bats should include the installation of a single free-standing 'Kent'-style bat box erected at the gable end of the rear of the building and the inclusion of bat friendly planting to the garden.

1.0 Introduction

1.1 Background

A Preliminary Roost Assessment report (BS40-2020) dated 8th January 2021 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 these additional surveys.

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. 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

External Dusk emergence and Dawn re-entry surveys

The objective of the activity 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.

- The survey timings accord with best practice guidance, with dusk surveys commencing 15 minutes before sunset and continuing for approximately 1.5-2hours after[1]. Dawn re-entry surveys commenced 1.5 hours before sunrise and continued until 15 minutes after sunrise[1].
- Identification of further bat species primarily through the use of ultrasound characteristics. To aid identification flight and habitat characteristics were also noted (where possible) to determine the species.
- The surveys were designed with sufficient surveyors appropriately positioned to ensure that all potential access points to the building could be observed simultaneously (see Figure 1 for locations).
- The surveys also identify the number of bats leaving or entering the building.

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: 20:43 Sunset: 20:58 End: 22:13	Temp: 11^{0}C Humidity: 85% Wind speed: mph – 19WSW Cloud cover: 80% Rain: none	Temp: 10^{0}C Humidity: 80% Wind speed: mph – 17WSW Cloud cover: 5% Rain: none
	Surveyors		
	1. Darren Mason	Notes: Light Lux 2 at 21:33	

Table 1. Site conditions for dusk emergence survey 11-5-21

Survey Information:	Start and End Times:	Conditions (Start):	Conditions (End):
Dawn Re-entry: 8/6/21	Start: 03:48 Sunrise: 05:17 End: 05:32	Temp: 13^{0}C Humidity: 79.5% Wind speed: 7mph Cloud cover: 0% Rain:	Temp: 14.5^{0}C Humidity: 63.5% Wind speed: 5mph Cloud cover: 0% Rain:
	Surveyors		
	1. Darren Mason		

Table 2. Site conditions for dawn re-entry survey 8-6-21

Figure 1. Surveyor location for both presence/absence surveys 11-5-21 and 8-6-21

3.2 Dusk emergence roost survey results

During the dusk emergence survey (11-5-21) 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 bat activity was confined to commuting behaviour only. All species recorded were Common Pipistrelle (*Pipistrellus pipistrellus*).

In total 5 bat passes were recorded, the first 35 minutes after sunset, well within the normal temporal parameters of this species[2,3]. No bats were observed in flight (See Appendix A for all contacts). Activity levels were deemed low however this may be because of the relatively low temperatures. Bats are known to fly when temperatures rise above 8^0C if insects are active, but as flight is energetically demanding and if insect levels are low hunting may not be profitable[4], therefore low numbers of prey may also be a reason for reduced bat activity during the survey.

The dawn re-entry survey undertaken on the 8th of June recorded no bats entering or exiting the building. Only 5 passes, all by Common Pipistrelle were recorded. All passes were unseen, recorded audially and consisted of commuting behaviour/calls only. The first contact was recorded at 4:00am, with the last at 4:31am, one hour prior to sunrise (for all contacts please refer to Appendix A).

3.3 Summary

The results of the dusk emergence and dawn re-entry surveys have confirmed the likely absence of bats at Reculver. However, the results can only be based on presence/absence at a particular time as bats are highly mobile in nature 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 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 Reculver 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: **Impacts to bats:** **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. **Construction:** – A positive impact on the local population of Common Pipistrelle bats may result through the incorporation of new roost(s) in the new buildings[6]			

Key to Legislation and Mitigation Hierarchy
CHSR – Conservation of Habitats and Species Regulations 2017[7] - http://www.legislation.gov.uk/uksi/2017/1012/made W&CA – Wildlife & Countryside Act 1981 (as amended)[8] - http://www.legislation.gov.uk/ukpga/1981/69/contents HRA – Hedgerow Regulations Act 1997[9] - https://www.legislation.gov.uk/uksi/1997/1160/made **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 PRA (BS40) 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 PRA (BS40-2020) 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) at the apex of rear (south-facing) gable end of the building. Erect as high as possible, but below the level of the fascia.
ii. Consider enhancing the garden with bat-friendly plants, that are attractive to a wide variety of insects and that provide, colour, scent and invertebrate interest throughout the year (see Appendix C for ideas).

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

APPENDIX A – BAT CONTACTS SURVEY TABLE

Date:	11/5/21 – Dusk emergence survey			
Survey Type:	**Surveyor 1**	**Surveyor 2**	**Surveyor 3**	**Night vision camera**
Location:	Unseen, unseen, unseen, unseen, and unseen			
Exit/Entry point:	None recorded			
Time(s):	21:33; 221:35; 21:36; 22:04 and 22:06			
Species of bat:	Common Pipistrelle			
Roost present:	None confirmed			

(fb) – feeding buzz

Date:	8/6/21 – dawn re-entry survey			
Survey Type:	**Surveyor 1**	**Surveyor 2**	**Surveyor 3**	**Night vision camera**
Location:	Unseen, unseen, unseen, unseen, and unseen			
Exit/Entry point:	None recorded			
Time(s):	04:00; 04:08; 04:27; 04:28 and 04:31			
Species of bat:	Common pipistrelle			
Roost present:	None confirmed			

APPENDIX B – SUPPLIERS

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 IDEAS

List of species taken from the Bat Conservation Trust Leaflet: "*Encouraging Bats. A Guide for Bat Friendly Gardening and Living*" (BCT 2015)[10]

*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