

PRELIMINARY ECOLOGICAL APPRAISAL & PRELIMINARY BAT ROOST ASSESSMENT OF:

10 PARSONS FIELD
HUGH TOWN
ST MARY'S
ISLES OF SCILLY
TR21 0JJ

Client: Mr Scott Hicks

Our reference: BS33-2020

Planning Application reference: P/20/045

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Non-Technical Summary

- On 8th July 2020, the Isles of Scilly Wildlife Trust (IoSWT) conducted a Preliminary Ecological Appraisal (PEA) and Preliminary Roost Assessment (PRA) of the conservatory of 10 Parsons, Field, Hugh Town, St Mary's, Isles of Scilly, TR21 0JJ (BS33-2020), in order 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/20/045
- This report outlines the findings of the PEA and PRA assessment and provides advice based on the surveys' conclusions. As the proposals contained within the planning application relate only to works within the existing footprint and structure of the existing building, this assessment is primarily focused on the PRA of the building.
- During the PRA, an external inspection of the building was undertaken (where accessible).
- All areas could be accessed and evaluated for roost potential and for evidence of bats.
- No evidence of nesting birds was found.
- No vegetation of conservation interest was found in the immediate surrounding habitat
- No small mammal droppings were found.
- The immediate habitat surrounding the proposed development suggests poor habitat for foraging bats, but quickly becomes optimal with mature gardens to the west and the abundant strandline to the south.
- The proposed project externally presented with minimal features that could be used by crevice-roosting species such as Common and Soprano Pipistrelle, or void-roosting species such as Brown Long-eared Bat.
- Taken in combination, the characteristics of the building and the surrounding habitat suggests **negligible roost potential for bats**
- To assist in meeting both national and local planning policy obligations for net gains in biodiversity the proposed development should undertake at least one of the suggested enhancement measures outlined in this report
- The recommendations of this PEA and PRA are that no further surveys or an EPS license application are required
- If the recommendations given in this report are adhered to, there should be no further ecological constraints to the proposal
- **This report is sufficient to support a planning application.**

1.0 Introduction

1.1 Survey and reporting

This report details the results of a preliminary ecological appraisal and a preliminary bat roost assessment of the conservatory which constitutes part of the core component of the residential dwelling of 10 Parsons, Field, Hugh Town, St Mary's, Isles of Scilly, TR21 0JJ. The survey was carried out on the 8th July 2020.

1.2 The application site

The conservatory is in the centre of Hugh Town, St Mary's (National Grid Reference SV9015010463)
The application site is comprised of a medium, semi-detached two-storey house, with adjoining uPVC conservatory, set within its own plot (see Figure 1 below).



Figure 1. Location

1.3 Details of proposed works

The planning application (P/20/045) proposes the conversion of the conservatory (see photo 1.) into extended domestic space on the same footprint, with an increase in height of the existing roof to meet current building regulations for insulation, which will be tied into the main dwellings roof structure.



Photo 1.

2.0 Methodology

2.1 Preliminary Ecological Appraisal - Desk Study

A desk study data search was undertaken. This involved carrying out a review of the Local Records Centres (LRC) available records for bat species and publicly available datasets and citations of statutory designated sites of importance for nature conservation for sites within the zone of influence (ZOI) of the survey area (considered to be a maximum of 2km in this case). The desk study was also undertaken to identify habitats and features that are likely to be important for bats and assess their connectivity through the use of aerial photographs.

2.2 Preliminary Bat Roost Assessment

The Preliminary Bat Roost Assessment comprised a survey of the building for bats, signs of bats and features potentially suitable for use by roosting bats, and an assessment of the surrounding habitat in terms of its suitability for commuting and foraging bats.

The survey consisted of a ground based inspection and a detailed search of the interior and exterior of the building (from ground level), looking for bats and/or evidence of bats including droppings (on walls and windowsills and in roof and loft spaces), rub or scratch marks, staining at potential roosts and exit holes, live or dead bats and features, such as raised or missing tiles, potentially suitable for use by roosting bats. Binoculars, a ladder and a high-powered torch were used as required.

2.3 Classification of building

The building was classified according to its suitability for use by roosting bats. The classification was dependent on a number of factors including (but not limited to):

- Bats and/or signs of bats;
- External and internal features potentially suitable for use by roosting bats (e.g. raised or missing tiles, gaps behind fascia boards etc);
- Setting;
- Night time light levels;
- Disturbance levels;
- Proximity of suitable foraging habitat and commuting routes (e.g. ponds, streams, woodland, large gardens, hedgerows).

The categories used to classify buildings and the survey effort required to determine the presence or absence of bats (as per the Bat Conservation Trust's Bat Survey Guidelines¹, referred to by Natural England in their standing advice to planning officers) are described in Table 1 (see below).

2.4 Surveyor details

The survey was undertaken by Darren Mason BSc of the Isles of Scilly Wildlife Trust. Darren has undertaken professional Bat Licence Training to permit him to undertake professional surveys and is currently gathering sufficient 'working hours' to achieve a Natural England Class Level 2 licence.

Table 1 – Description of the categories used to classify a building’s bat roost potential and the survey effort required to determine the likely presence or absence of bats

	Roost status	Description	Survey effort required to determine the likely presence or absence of bats
Bat Roost Potential	High	Numerous features potentially suitable for use by roosting bats, optimal or good quality bat foraging habitat nearby and good habitat connectivity. Alternatively, a building with fewer features potentially suitable for use by roosting bats and optimal foraging habitat nearby.	Three dusk emergence and/or pre-dawn re-entry surveys between May and September. Optimum period May – August. Two surveys should be undertaken during the optimal period and at least one survey should be a pre-dawn survey.
	Moderate	More than a few features potentially suitable for use by roosting bats, good foraging habitat nearby and limited habitat connectivity. Alternatively, a building with a few features potentially suitable for use by roosting bats but optimal foraging habitat nearby.	Two or three dusk emergence and/or pre-dawn re-entry surveys between May and September (but only if features will be affected by the proposals).
	Low	Only a few features potentially suitable for use by roosting bats but good bat foraging habitat nearby. Alternatively, a building with more than a few features potentially suitable for use by roosting bats but sub-optimal foraging habitat nearby and limited habitat connectivity.	One or two dusk emergence and/or pre-dawn re-entry surveys between May and September (but only if features will be affected by the proposals).
	Negligible	Very few features potentially suitable for use by roosting bats and / or in an area (such as a densely populated urban area) which has limited habitat connectivity and poor foraging habitat.	No further surveys required.

Table 1. Categorising and classifying a building’s bat roost potential

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

3. Results

Preliminary Ecological Appraisal

3.1 Pre-existing information on bat species

The desk study showed that no species of bat had previously been recorded within the building. A data search of LRC records for bats revealed information on 5 species of bat recorded within the 2km ZOI of the site. The species conclusively identified were Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*) and Brown Long-eared Bat (*Plecotus auritus*) both UK Biodiversity Action Plan (BAP) priority species, Whiskered Bat (*Myotis mystacinus*) and the rare Nathusius Pipistrelle (*Pipistrellus nathusii*). Several bat roosts are known to exist within the 2km of the proposed development, with 2 known roosts within 500m of the property.

3.2 Statutory and non-statutory sites

In addition, the desk study revealed the presence of the following statutory designated sites within the 2Km ZOI of the site:

- i.) **Peninnis Head SSSI** – Lying 580m south east of the proposed development is Peninnis Head SSSI. The site designated primarily for its maritime heathland, maritime grassland and scrub habitats together with good populations of a number of rare plant and lichen species, in addition to its significant quaternary geomorphology.
- ii.) **Lower Moors SSSI** – Situated 505m due east of 7 Garrison lane lies Lower Moors SSSI. A topogenous mire that has a range of wetland habitats supporting a diverse range of wetland wildflower species, including the Nationally Scarce Tubular Water-dropwort (*Oenanthe fistulosa*). The site also holds locally important populations of Royal Fern (*Osmunda regalis*) and Southern Marsh Orchid (*Dactylorhiza praetermissa*) and is particularly important feeding for passage and wintering birds including Corncrake (*Crex crex*) and Spotted Crake (*Porzana porzana*).
- iii.) **Higher Moors & Porth Hellick Pool SSSI** – 1.61km east north-east of the proposed development is Higher Moors SSSI. A topogenous mire designated for several rare and notable plant species) including; Bog pimpernel (*Anagallis tenella*), Star Sedge (*Carex echinata*) and Marsh St John's-wort (*Hypericum elodes*).

3.3 Habitats surrounding the application site

10 Parson Field lies within the Built-Up Areas Boundaries² (2011) for England and Wales (published by the Office for National Statistics, Geography). Sitting at the western end of Hugh Town at the base of the eastern slopes of the Garrison, Parsons Field comprising a mixture of size houses and bungalows and their associated gardens. The street lighting throughout the town is intermittent, consisting primarily of orange sodium lighting. Though intermittent, the amount of lighting does increase around the area of Little Porth and particularly along the lower slopes of the Garrison approximately 85m away. The nearest light is situated 30m east of the property and is modern in design consisting of directional LED lighting.

The nearest potential foraging feature to the proposed development lies immediately to the south, consisting of the small enclosed gardens of the houses on Little Porth. These houses offer a corridor to the eastern wooded slopes of the Garrison approximately 300m away, consisting of large areas of rough and improved grassland, healthland and scrub interspersed with small mixed species shelterbelts. Directly to the south of the property is the strandline of Porthcressa beach stretching that runs west to east. To the east lies Buzza Hill, an open area of grassland and scrub, which is linked to the wider countryside and to the SSSI of Lower Moors by a range of mature gardens, the old school site at Carn Thomas and the small allotments below Pilot's Retreat. For a further 2km north and east the countryside consists of a mixture of small, enclosed fields bounded by hedgerows, linked to small linear shelterbelts, beyond the SSSI.

In summary, the immediate habitat surrounding the proposed development has limited opportunity for bats to commute and feed. Commuting routes to the east are hampered by the main built up area of Hugh Town, with limited mature gardens and those areas available to feed. It has been shown that street lighting can negatively impact upon a bats commuting and foraging routes³ however this may be dependent on the species, for example species such as Common Pipistrelle will feed around street-lighting to take advantage of the insectivorous prey that congregates around them. However, this has been shown to be dependent on the light emitting from the lamps, with orange sodium light (found here in this instance) having the greatest negative impact on feeding opportunities⁴.

Though Soprano Pipistrelle have been shown to utilise more built up areas, compared to Common Pipistrelle⁵ all species of bat require 'edge' habitat like hedgerows to both feed from and commute to other feeding areas^{6, 7&8}. This type of habitat is limited, particularly to the north and to the west and quickly breaks down after approximately 150m, where the landscape becomes very open, which most

species of bat prefer not to utilise⁹. In contrast edge habitat is almost continuous to the east and north-east for at least two kilometres, providing access to a wider variety of habitats for which Common Pipistrelle are known to take advantage of¹⁰, including the strand-line along the beaches¹¹ to the south. The former commuting routes would also be important for both Soprano and Nathusius Pipistrelle as they provide a feeding corridor to their preferred habitat of open water and watercourses^{6, 7&8}, habitats such as those found at both Lower and Higher Moors SSSIs and Holy Vale. The location of Storm Cottage also falls within the core sustenance zones of all three species being 1.7km, 1.5km to 3km respectively¹². However, these latter species may be limited by the lack of mature gardens and street lighting arrangement 250m east of the Cottage.

In contrast, Whiskered Bat in Britain has been shown to favour more open areas of semi-natural grassland and pasture with scattered hedgerows, or small woodland blocks^{13&14} in which to feed. Habitat such as the Garrison to the west and the golf course to the north-east are typical examples of such habitat which they could exploit and fall within the typical core sustenance zone for this species¹³. Brown Long-eared bat have been shown to prefer to feed in open canopy deciduous woodland typically located close to their roosts, which would also have larger tracts of woodland available to feed no greater than .5km away¹⁵, making the Garrison to the west and the former school site at Carn Thomas potential sites to feed. Both sites fall within this species core sustenance zone of 1.1km¹⁶, however the lack of trees in the immediate area of the complex may limit the site use as a roost.

3.4 Habitats within the application site

10 Parsons Field is set within its own grounds, surrounded on three sides by modern wooden fencing. The garden within the development comprises of a large wooden decking area surrounding the conservatory and a small area below laid primarily to lawn containing scattered shrubs. Scattered throughout the decking area are several storage sheds, along with pots planted with Iceplant (*Mesembryanthemum* sp.), House Leek (*Aeonium* sp.), Cabbage Palm (*Cordyline* sp.) and vegetables including Sweet Pea (*Lathyrus odoratus*), Courgette (*Cucurbita pepo*) and Tomato (*Solanum lycopersicum*). Shrubs found within the lawn area included Tree Fuchsia (*Fuchsia excorticata*), Rose (*Rosa* sp.), Rosemary (*Salvia Rosmarinus*), Hydrangea (*Hydrangea macrophylla*) and a Knotweed species (*Fallopia* sp.)

In summary, there are few beneficial species of shrub and plants that may attract invertebrates which bats may prey upon within the immediate footprint of 10 Parsons Field. Despite there being mature gardens south of the proposed development, the immediate habitat can be classed as poor for bats.

Preliminary Roost Assessment

3.5 External

The conservatory at 10 Parsons Field is uPVC in construction and double-glazed with an approximate east-facing pitch of 5°. The conservatory is not tied-in to the main house but sits flush with the eastern elevation of the main house. The roof of the conservatory sits below the level of the soffit and fascia boards of the main house and is tied into the main building (below the soffit boards) with lead flashing.

Throughout, there are no cracks or crevices between the brickwork and the conservatory for bats to take advantage of as a roosting space. Gaps are present between the lead flashing and the conservatory roof, particularly where the flashing fits over the top of the roof bars (see photo 2.), which may present roosting opportunities.

However, when viewed internally (see photo 3.) the glass roof, the likely variable temperatures of the conservatory and disturbance through regular use negates this.



photo 2.

The main house is cement rendered which appears in good condition throughout the eastern elevation, presenting with no cracks, or loose cement which bats could utilise as a roost. uPVC fascia are present along the full length of the eastern aspect, along with wooden soffit boards which appear tightly bound to the external rendering as well as between the soffit boards themselves and the fascia, providing no opportunities for bats to roost between. A large hole was identified in the soffit

board above the south corner of the conservatory roof (see photo 4). However, on closer inspection this was filled with expandable foam, with no crevices which a bat could use to roost. The roof of the main house has a pitch of approximately 35° and is covered with modern, tight-fitting cement tiles that offered



Photo 3.

no potential roost space for crevice-dwelling bats. The two dormer windows were tied into the roof with lead flashing, which was well-constructed and tight-fitting, negating any potential roosting opportunities. Likewise, the flashing surrounding the single velux window. There was however, what appeared to be a broken tile at the bottom right corner of the velux (see photo 5), which appeared to create a suitable crevice, but on closer inspection no roosting opportunity was present as a result of the amount of overlap between the two tiles.



Photo 4.



Photo 5.

Inspection of the conservatory roof, the numerous storage shed roofs and the decking revealed no bat droppings.

3.6 Internal

The conservatory by nature was very open and light, with exposed roof bars. The regular use of the conservatory as the main entrance/exit of the house and the variable temperatures created as result of its construction provides little opportunity for bats to utilise as a roost. The conversion of the conservatory will require the first 10 courses of tiles of the roof of the main house to be removed (only to the same width of the existing conservatory) in order to raise the roof sufficiently to meet current building regulations for loft insulation. No internal inspection of the roof space of the main house was carried out based on the external condition of both the fascia and soffit boards and construction of the roof.

3.7 Summary

The very open nature of the conservatory, its variable temperatures and regular disturbance levels limits any potential roosting opportunities for both crevice-dwelling and void-roosting species of bat. Likewise, the construction and condition of the main building offers little, or no roosting opportunities. This, in combination with the lack of suitable feeding habitat immediately surrounding the development also reduces the likelihood as the conservatory and the first 10 courses of roof tiles of the main house at 10 Parsons Fields being used as a roost.

Assessment and recommendations (excluding bats)

4. Evaluation of Results

4.1 Protected sites

The proposed development falls into the SSSI Impact Risk Zones of Lower Moors, Higher Moors & Porth Hellick Pool and Penninis Head SSSIs. Impact zones are used in the assessment of planning applications for likely impacts on SSSI's, Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar Sites (England). However, the impact in this zone is for large-scale residential developments and therefore the development is not likely to impact on the surrounding SSSIs.

4.2. Ecological features of importance

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 undertaken¹⁷. 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
Habitats:				
Building (roost sites)	CHSR, W&CA	Negligible	A	Low
<p>Impacts:</p> <p>Demolition: – None predicted as long as Reasonable Avoidance Measures (RAM) are followed (see section 5)</p> <p>Construction: – None.</p> <p>Operational impact: - None predicted</p> <p>Please note a summary of criminal offences with respect to bats and their roosts. This can be found at: http://www.bats.org.uk/pages/bats_and_the_law.html</p>				
Species:				
Bats	CHSR, W&CA, NPPF	International	A, E	Low
<p>Impacts:</p> <p>Demolition – None predicted as long as Reasonable Avoidance Measures (RAM) are followed (see section 5)</p> <p>Construction/post-construction –_None. Positive impact may result through enhancement by increased roost availability¹⁸</p> <p>Operational impact: - None predicted, however please note a summary of criminal offences with respect to bats and their roosts. This can be found at: http://www.bats.org.uk/pages/bats_and_the_law.html</p>				
Key to Legislation and Mitigation Hierarchy				
<p>CHSR – Conservation of Habitats and Species Regulations 2017¹⁹- http://www.legislation.gov.uk/ukxi/2017/1012/made W&CA – Wildlife & Countryside Act 1981 (as amended)²⁰ - http://www.legislation.gov.uk/ukpga/1981/69/contents NPPF – National Planning Policy Framework 2019²¹ - https://www.gov.uk/government/publications/national-planning-policy-framework--2 A – Avoid, M – Mitigate, C – Compensate, E - Enhancement</p>				

Table 1.

5. Recommendations and Mitigation (bats)

The recommendations in this section are provided as information only and are the professional opinions of the author. Note; if building works are delayed for more than one year, then re-assessment may be required.

5.1 Further survey requirements

In the professional opinion of the author **no further surveys are required**. BCT guidance suggests that for buildings with negligible roost potential no further surveys are required. The survey carried out to date follows this guidance, is proportionate to the scale of the development and the information provided is believed to be sufficient to inform the planning decision.

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 (see Appendix A for details). In this instance based on sufficient survey work **no EPS licence is required**. If in the unlikely event a bat were found during the demolition phase of the project, Reasonable Avoidance Measures (RAM) must be followed and will determine any further action, such as licensing.

5.3 Mitigation – Further Action

As there is a low risk that bats may roost within the building (due to the identification of 1 or 2 small roost features), prior to demolition, precautions should be taken to reduce the probability of committing an offence. If affected RAM should include:

Avoidance (A) - Bats

- i. 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
- ii. No significant constraints on timing of works are considered necessary however **the months of November to February should be avoided** where possible as this is when bats enter a time of torpor which makes disturbance impacts more significant
- iii. Carry out careful checks of any potential cracks/crevices and cavities in or on the building prior to demolition. Signs of usage include; bat droppings, discoloration 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 others areas. If 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

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 2006²² (NERC 2006) to have due regard for biodiversity when carrying out their functions and under Section 15 paragraph 170(d) of the NPPF 2019, 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 could be undertaken:**

- i. Erect a free-standing bat box developed for crevice-dwelling species (see figure 2 for examples and Appendix A for supplier details) at the apex of the gable end of the southern elevation of the main house. Erect as high as possible.

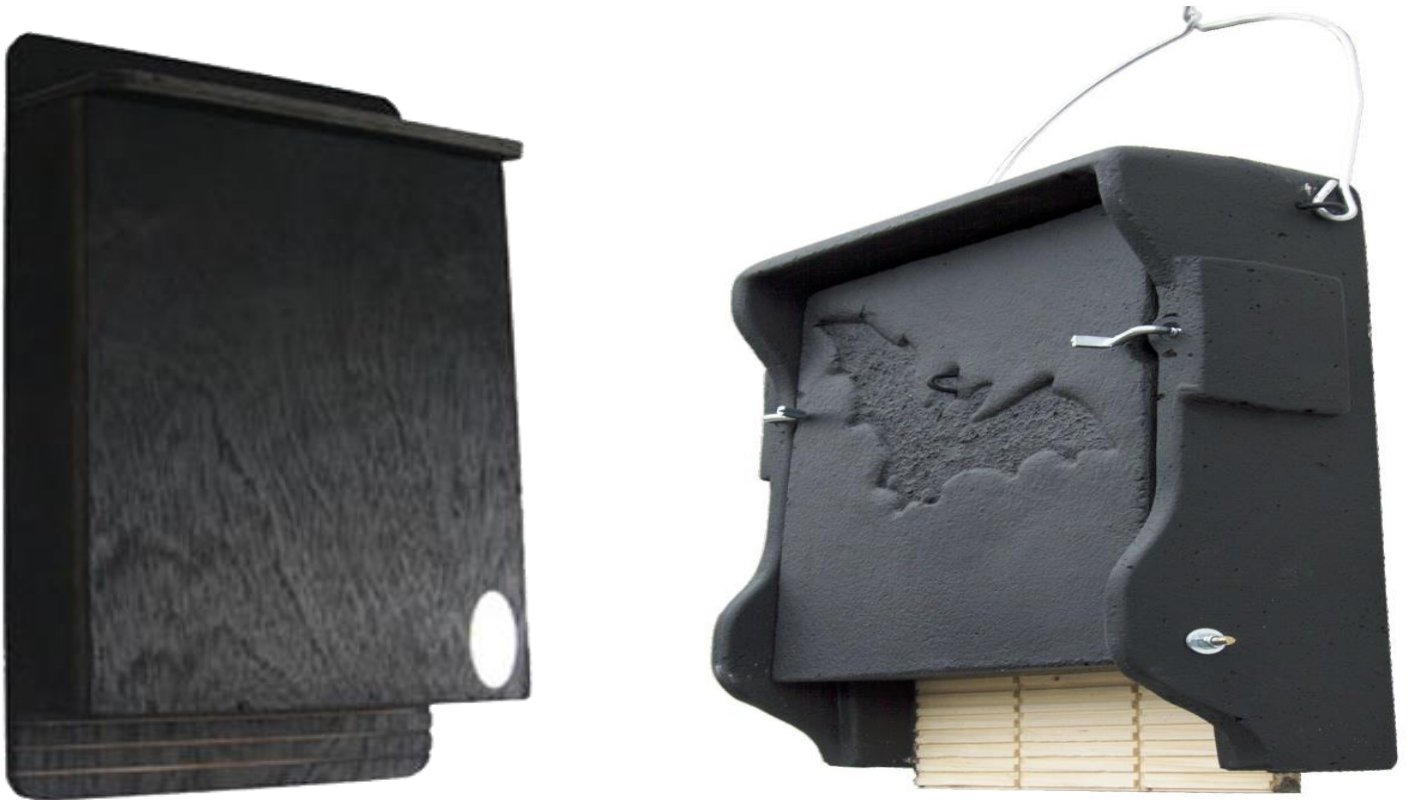


Figure 2. free-standing bat box examples

https://www.nhbs.com/browse/search?q=bat%20boxes&hPP=30&idx=titles&p=0&is_v=1&qtview=158636

<https://www.nhbs.com/browse/search?q=bat+boxes&qtview=176916>

6. Summary

The conservatory at 10 Parsons Field (including the removal of the first 10 courses of tiles from the roof of the main building) is found to have negligible roost potential for bats, despite links to the wider countryside to optimal foraging habitat. . In the professional opinion of the author no further surveys are required, and no EPS license is required. However, to enhance the area for local populations of bat and assist the local authority's obligation to provide net gain in biodiversity the erection of 1 free-standing bat box should be undertaken. If the recommendations given in this report are adhered to, there should be no further ecological constraints to the proposal.

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APPENDIX A – SUPPLIERS

1. Natural History Book Service
1-6 The Stables
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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