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# Phase 1 bat and nesting bird survey report

Site: 2 Penmayne Cottage,
Dingles Way,
Rock,
PL27 6BP

For: Mr. & Mrs. Clayton

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

January 2024

| | Name | Date | Signature |
|---|---|---|---|
| Report prepared by: | Richard Bates, BSc ACIEEM | 08.01.24 | [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 who 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.**

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# Contents

Executive Summary

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| Survey date: | 19th December 2023 |
| Location: | 2 Penmayne Cottage, Dingles Way, Rock PL27 6BP |
| Grid Reference: | SW 94711 76120 |
| Surveyor: | Richard Bates, ACIEEM BSc, bat licence ref: 2017-30400-CLS-CLS |

Devon and Cornwall Ecology was commissioned to undertake a phase 1 bat and nesting bird survey of a residential property on behalf the clients, Mr. & Mrs. Clayton. The survey was undertaken to support a planning application to extend the property. This will include works affecting an existing extension.

A full internal and external inspection of the building was conducted on the 19th December 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 found negligible potential for crevice dwelling bats externally with no evidence of bats internally. No further survey work is required but simple precautions have been included in section 5 to be undertaken during the development.

Nearby linear features (hedgerows/walls on site boundaries) 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 recorded and no further survey work is required regarding birds.

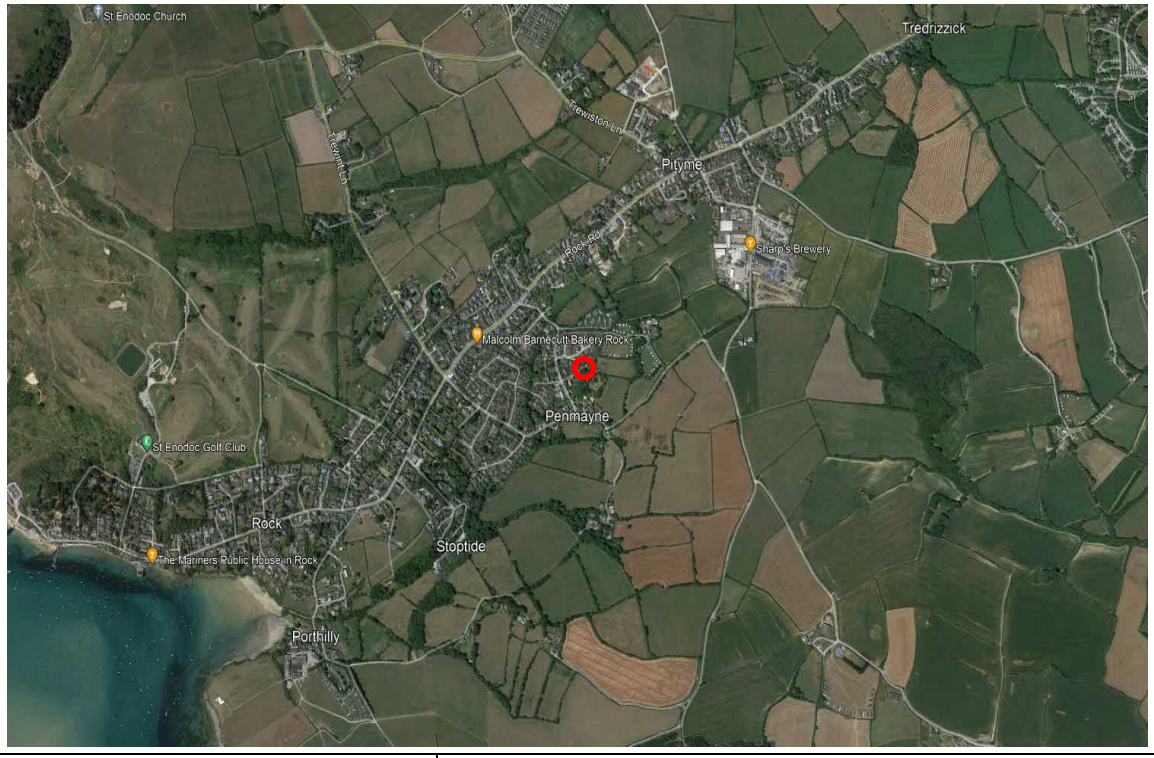
As part of the National Planning Policy Framework (2023), local planning authorities aim to secure enhancements for biodiversity for all developments. To achieve this aim recommendations for simple site enhancements have been included in section 5.

## 1. Introduction

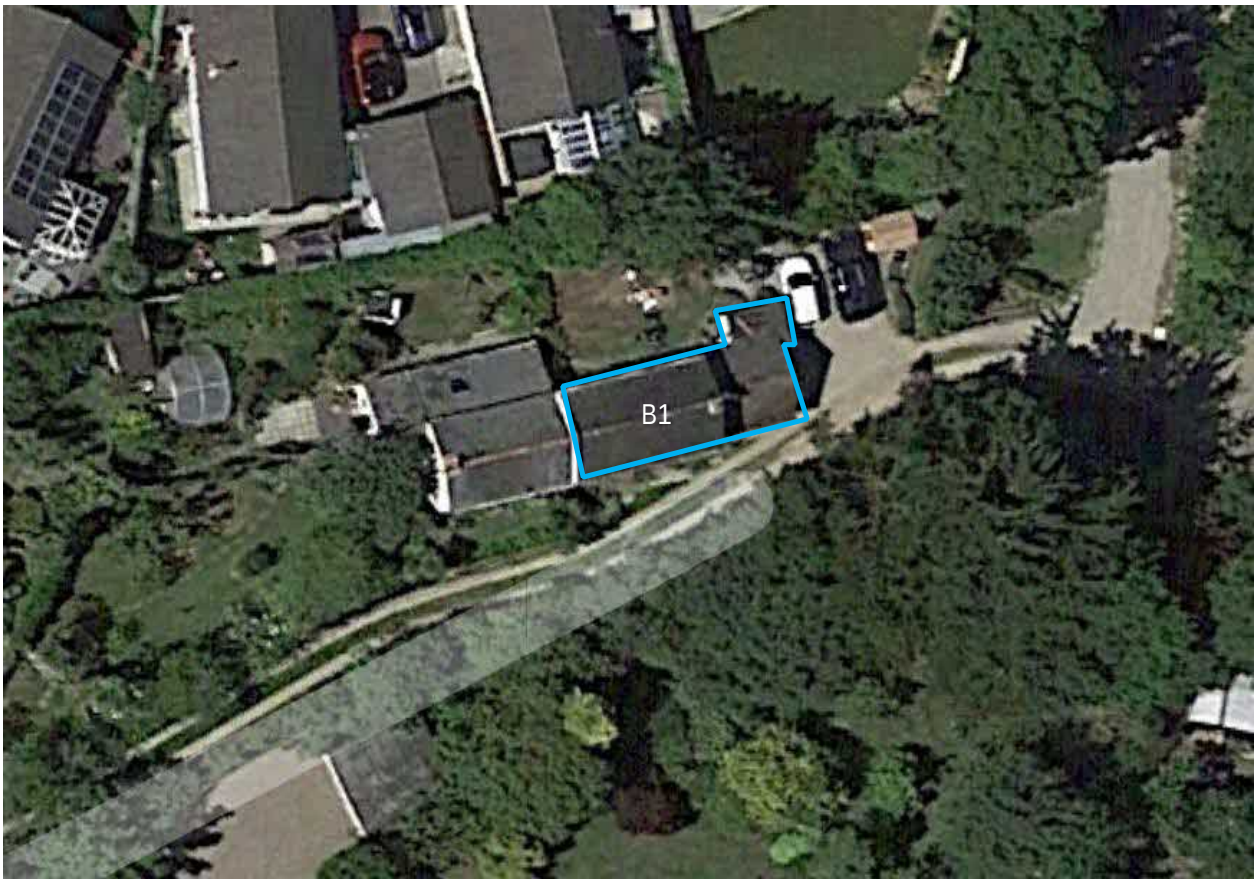
Devon & Cornwall Ecology were commissioned to undertake a phase 1 bat and nesting bird survey of a residential property at 2 Penmayne Cottage, Rock. The survey was undertaken to support a planning application to extend the property. This will include demolishing and replacing an existing extension. The 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. Clayton. It is in a semi-rural setting on the outskirts of the village of Rock. The proposed development is centred on grid reference SW 94711 76120 and comprises a two-storey semi-detached structure with a single storey extension. In its immediate setting the site is bordered by low density residential properties in all directions.

In the wider landscape the site is located in a setting that is of mixed favourability for bats; a network of agricultural fields with mature hedgerows is present to the south and east of the site. These are largely accessible from the site via a small network of rural tracks and extensive gardens. The habitats to the east are likely to provide good foraging and commuting opportunities for a range of bat species. However, habitats directly to the north and west are less favourable for bats. The urban development of Rock is located in this direction, creating a significant barrier for bats due to the network of roads and artificial lighting. However, this is the only significant urban development within 2km of the site, which otherwise has good connectivity to the wider landscape through the identified network of hedgerows and rural tracks.




| | |
|---|---|
| Wider landscape view of 2 Penmayne Cottage, Rock (Google Earth Pro). | Approximate site location |




| | |
|---|---|
| Site layout of 2 Penmayne Cottage, Rock (Google Earth Pro). | Approximate outline of structure. |

## 2. Species records and desktop survey

A site specific data search of protected species records has not been requested for this development. It is considered unlikely that a data search will provide productive information given the development is highly unlikely to impact on protected species. Neighbouring habitats will remain intact and unaffected by the development. Provided the recommendations on artificial lighting in section 5 are complied with, no impact on bat foraging or commuting opportunities are predicted.

However, a search of publicly available records returned instances of common pipistrelle (Pipistrellus pipistrellus) and greater horseshoe (Rhinolophus ferrumequinum) bats within 2km of the site. A search of granted European Protected Species licences (through the Natural England Magic Map website) returned two records of a bat licence being issued within 2km of the site. These licences were issued for roosts comprising common pipistrelle, soprano pipistrelle (Pipistrellus pygmaeus), brown long-eared (Plecotus auritus), lesser horseshoe (Rhinolophus hipposideros) and greater horseshoe bats. One of these licences was issued for a maternity colony of common pipistrelle and/or brown long-eared bats.

## 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 1 below:

Table 1 - Criteria for assessing bat roosting potential of buildings and trees

| | |
|---|---|
| Confirmed Roost | Evidence of bat occupation found, including live bats, droppings, corpses, grease and/or scratch marks and urine staining. |
| 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 2 below, adapted from the Good Practice Guidelines (Collins et al, 2016):

Table 2 - 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.<br>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.<br>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.<br>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 – Residential building B1

The survey noted the following about the building:

External

Photograph 1 – View of the north aspect.

The building is a two storey traditional stone cottage with a modern single storey flat and pitched roof extension. This extension is to be demolished and replaced with a two storey extension.
The main cottage and extension both have pitched roofs with clay ridge tiles. The extension roof appears to be asbestos/fibreboard tiles while the cottage is a slate roof. The roofs are relatively recent and in very good condition; only one gap was noted beneath the west end ridge tile on the cottage. This tile is located well outside the proposed work area and will remain unaffected. No other suitable roof features were noted.
One chimney is present on the cottage roof. This is lead sealed and in good condition. Small gaps were noted around the chimney; these are mostly shallow and unsuitable and none are due to be affected by the proposed development.
The gable end roof tiles are well sealed on the cottage. On the extension small gaps are present beneath the end tiles. However, these are mostly cobwebbed over and a close inspection revealed no evidence of use by bats.
The extension also has a small flat roof section. This section has a bituminous felt covering that is in good condition. No gaps were noted around the edges of the felt.
The flat roof section also has gaps along the wall tops where an overhang/awning is present. However, these could be closely inspected from ground level and were found to be cobwebbed over with no evidence of use by bats.

No soffits are present on the cottage. However, the eaves appear to have been well sealed when the building was re-roofed – areas of modern plastic felting are present along the sealed wall tops of the building and no gaps were found.
The building and extension have uPVC guttering, windows and doors. These are all in good condition with no gaps around frames or behind guttering.
Wooden bargeboards are present on the extension. These are well fitted with no gaps behind the boards.

Internal

Photograph 2 – View of the internal void.

The building has a single void space. It measures approximately 9m by 4m and 1m in height. The low ridge height of the void limits its suitability for bats.
The void has a traditional roof structure with king beam supports, ridge beams and purlins present. These provide good roosting positions for bats but were noted as being cobwebbed over.
The void has modern breathable membrane lining. This is in good condition with no holes noted.
No potential access points or openings were noted in the void.
The void is insulated throughout. These was noted as having occasional mouse droppings but no evidence of use by bats.

4.2 Bats – Commuting and Foraging

The shrubs and hedges of the site boundary were assessed as having moderate foraging and commuting opportunities for bats, based on guidance summarised in Table 2. The north and south sides of the site was assessed as presenting the highest suitability for foraging and commuting bats, given the connectivity to nearby agricultural fields.

The proposed development has been designed to complementary to its surroundings and will minimise any potential impacts. No significant additional lighting is proposed. 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 and no further survey work is required.

Survey Constraints
No significant constraints were noted.

## 5. Recommendations

### 5.1 Bats

The phase 1 survey recorded negligible potential for bats at the site and negligible potential within proposed work areas. As such no further survey work is required for this structure. However, bats do move around regularly and can adopt new roosts. Although it is unlikely that bats will adopt this building, a simple precautionary approach will be undertaken:

- All tiles affected by the development will be removed by lifting them from the batons. The panels will not be slid from the roof as this can cause accidentally crushing injuries if bats are present. The reverse side of all tiles will be inspected to ensure no bats are present. Should bats be encountered during this process, all work will cease immediately and a licensed ecologist will be consulted.
- All bargeboards, soffits and other fascia will be carefully removed using hand tools. The reverse side of all lengths of fascia will be checked for bats before being lowered to ground level.
- If a bat is discovered during any other works at the site, all works will cease immediately and a licensed ecologist will be consulted. This advice may include leaving the bat to disperse of its own accord or waiting for the licensed handler to arrive and move the bat. Builders and contractors are explicitly forbidden from handling bats.

The site boundaries were assessed as having moderate foraging and commuting opportunities for bats. The proposed work is a small scale development of the site but may include artificial lighting. Any proposed lighting plan will incorporate the following (where applicable) to minimise the potential for light disturbance:

- Construction work on site will be limited to daylight hours only. No artificial use of lighting will be used for construction 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.

### 5.2 Site enhancements

As part of the National Planning Policy Framework (2019), local planning authorities aim to secure enhancements for biodiversity for all developments. To achieve this aim the following will be incorporated into the design proposals for this site. Illustrative examples and suitable locations for these enhancements are available in Appendix 3:

Provision should be made for pollinating insects on site. A number of commercial products are available to 'house' important pollinators such as solitary bee and solitary wasp species. A minimum of one suitable product should be included to provide nesting opportunities. These may be free standing, attached to trees or installed on buildings. The provision of nesting opportunities for pollinators will be of benefit to a range of important insect species, the plants they pollinate and the mammals and birds that prey on them.

A minimum of one Schwegler brick nest boxes, or other suitable tree/building mounted bird box, should be installed at the site. The box will be positioned as high as possible on the wall or tree, a minimum of 3m from ground level. The boxes should also be located on a north facing aspect out of the prevailing wind and strong sunlight. The addition of bird boxes will provide nesting opportunities for common bird species.

One Schwegler 2F or 1FF bat box or, if compatible with the new building design, one Schwegler bat tube will be installed at the site. If a bat box is included this will be installed on an external wall. The box/tube will be positioned a minimum of 3m from ground level in a sheltered location. The box/tube also requires a clear, uncluttered flight path to the entrance point and will not be illuminated by any artificial light sources.

## 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

Collins, J., Charleston, P., Davidson-Watts, I., Markham, S. and Kerslake, L. (2016). Bat Surveys for Professional Ecologists Good Practice Guidelines. Bat Conservation Trust, London.

Gunnel, K., Grant, G., and Williams, C., (2012). Landscape and urban design for bats and biodiversity. Bat Conservation Trust.

Natural England (2020). Magic Map. Available at: http://www.natureonthemap.naturalengland.org.uk/MagicMap.aspx [Accessed 08.01.24]

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 the east aspect.

Photograph 2 – View of the south aspect of the cottage.

Photograph 3 – View of the south aspect of the extension.

Photograph 4 – View of the lead seal around the chimney.

Photograph 5 – View of the sealed eaves of the cottage roof.

Photograph 6 – View of the void roof structure.

Appendix 3: Examples of suitable site enhancement measures

Schwegler 2F Schwegler 1FF

Examples of tree or wall mounted bat boxes. Box should comprise one Schwegler 2F or Schwegler 1FF bat box to provide suitable roosting site for multiple bat species.

Schwegler 2FR

Example of Schwegler 2FR bat tube, designed to be incorporated into wall. To be installed on south or east aspect for protection from prevailing wind. Requires no maintenance and can be painted/rendered.

For either design, box should be located a minimum of 3m from ground level and with a clear, uncluttered flight path to the box entrances. Boxes must not be illuminated from any nearby artificial lighting.