



Phase 1 bat and nesting bird survey report


Site: Pool Cottage,
Mount,
Bodmin,
Cornwall,
PL30 4EU

For: Mr. & Mrs. Crisp.

Report

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

March 2021


	Name	Date	Signature
Report prepared by:	Richard Bates, BSc ACIEEM	02.03.21	

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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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Executive Summary

Survey date: 18th February, 2021
Location: Pool Cottage, Mount, Bodmin, PL30 4EU
Grid Reference: SX 14713 67879
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 garage outbuilding on behalf of the clients, Mr. & Mrs. Crisp. The survey was undertaken to support a planning application to convert and extend the garage for residential use.

A full internal and external inspection of the building was conducted on the 18th February 2021, 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 within the proposed work area and no internal evidence of bats. No further survey work is required. Simple precautions to be undertaken during the development have been included in section 5 in the unlikely event that bats are found.

Nearby linear features (hedgerows/walls/fences 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.

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 recommendations for simple site enhancements have been included in section 5.

1. Introduction

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

The site is under the ownership of the clients, Mr. & Mrs Crisp, and is located in a rural setting outside of any significant urban development. In its immediate setting the site is bordered by a private horse paddock to the south and agricultural fields to the north, east and west.

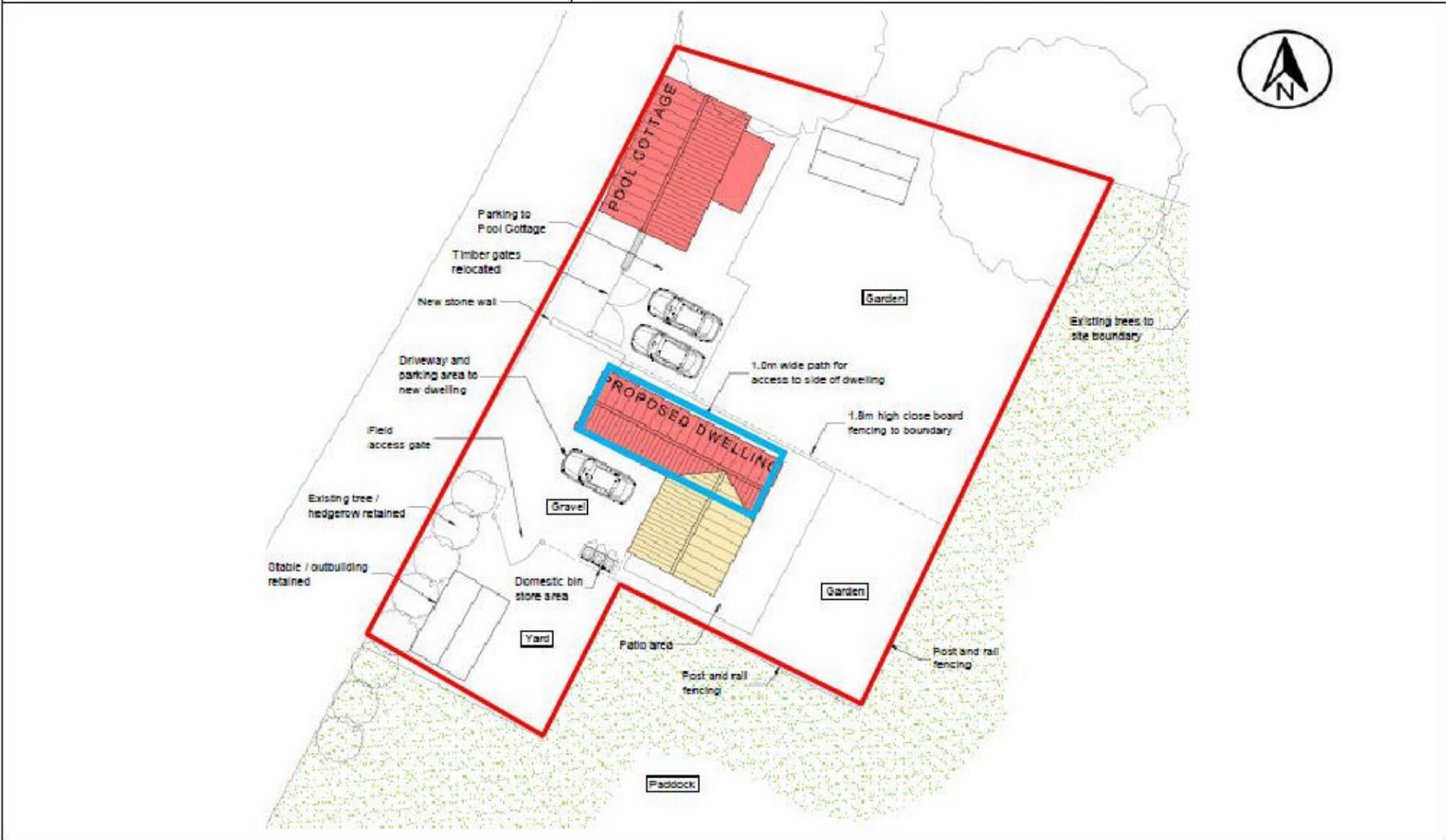
In the wider landscape, the site is located in rural setting that is highly favourable to bats; agricultural fields interspersed with extensive areas of woodland and wooded river valleys are present to the north, east and west, while agricultural fields are present to the south. Open heathland is present to the northwest. No significant urban development or transport infrastructure is present within 2km of the site. The site has excellent connectivity to the wider landscape through a network of hedgerows, woodland, country lanes and tree-lined watercourses.





Site layout of Pool Cottage, Mount (Google Earth Pro).

— Approximate outline of property.
— Outline of development area.



Site layout at Pool Cottage, Mount (Google Earth Pro).

— Approximate outline of converted building.
— Outline of development area.

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 suitable for bats 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.

A search of publicly available records returned only one instance of bats – Natterer's (*Myotis nattereri*) bats - within 2km of the site. This record was located almost 2km north of the site.

A search of granted European Protected Species licences (through the Natural England *Magic Map* website) returned two records of bat licences being issued within 5km of the site. These licences were issued for roosts comprising common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*) and Natterer's bats. Of the two licences, one is recorded as affecting a maternity roost of common pipistrelle, soprano pipistrelle and brown long-eared bats. The licence record does not specify which of the listed species comprise the maternity roost.

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

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

4. Results

4.1 Bats and nesting birds – Garage outbuilding B1

The survey noted the following about the garage:

Building B1



Photograph 1– View of the northwest aspect of the garage.

External

- The building is a single storey, rendered breeze block structure with a pitched roof.
- Clay ridge tiles and slate roof tiles are present on the structure.
- All roof tiles are in very good condition with only individual raised tiles noted. However, all raised tiles present very narrow, shallow gaps unsuitable for crevice dwelling bats.
- All ridge tiles are in excellent condition with no mortar missing beneath any of the tiles.
- No chimneys are present on the structure.
- Wooden soffits are present. These are in very good condition with no gaps noted.
- No bargeboards are present.
- Wooden door and window frames are present. The frames are well fitted although one was noted as rotten on the southeast gable end. However, no suitable gaps, access points or crevice features are present on that frame.
- The same gable end window appears to be regularly open for ventilation. This provides a small access point to the interior.
- A large metal garage door is present on the northwest gable end. A large gap is present along the top of this door, although this has been partially blocked internally with a plastic/roofing felt flap.
- uPVC guttering is present and in good condition. No gaps are present behind this guttering.



Photograph 2– Internal view of the garage structure.

Internal

- The building interior has an open plan with no separate roof void.
- The garage comprises two sections connected with a doorway. The first section is located at the southeast gable end and comprises a utility room while the northwest section is garage/storage area.
- Stored items are present. However, both sections are in regular daily use and no individual item appears to have been in storage for a considerable period. As a result all items are clean and relatively dust free. No evidence of animal droppings was noted.
- The roof structure comprises a modern diagonal truss design with king beam supports. These beams are tightly fitted with very limited roosting potential for bats.
- No ridge beam is present.
- Plastic roof lining is present and in very good condition. No suitable gaps or holes were noted.
- The interior of both sections is very well illuminated by the windows. This, combined with the lack of suitable roosting features, presents an interior that is considered unsuitable for roosting bats.
- No evidence of bats, such as droppings, feeding remains or scratch marks, was noted anywhere within the interior.

4.2 Bats – Commuting and Foraging

The hedgerow along the northern boundary was assessed as presenting the highest suitability for foraging and commuting bats, given the connectivity to the wider landscape and the presence of a hedgerow bordering an agricultural field. However, the east and south boundaries comprise mainly post and wire fencing and the west boundary includes a large gap to provide off-road parking. This reduces the suitability of these features, particularly along the east and south boundaries. Overall the site was assessed as having **moderate** foraging and commuting opportunities for bats, based on guidance summarised in Table 2.

The proposed development has been designed to be complementary to its surroundings and will minimise any potential impacts. No known or potential roosting opportunities will be affected. Although the southern boundary is likely to be removed during construction, this comprises a post and wire fence with negligible foraging and poor commuting potential for bats. This boundary will be re-instated post construction; all other boundaries will remain available 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 during the survey.

5. Recommendations

5.1 Bats

The phase 1 survey of the building recorded no evidence of bats and negligible potential for bats within the proposed work areas. As such no further survey work is required for this development. 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 during the development:

- All roof tiles and ridge tiles will be removed by lifting them from the batons or ridge. The tiles 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.
- 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, although this is primarily confined to the north boundary. The proposed work is a small scale residential development of the site and is unlikely to include significant additions to existing lighting. However, 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 will 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 will be included to provide nesting opportunities and can be installed within the design of the new building. 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 box or similar garden bird integrated nest box will be installed within a wall of new the building. The box will be positioned as high as possible on the wall. The box will also be located on the northwest or northeast facing wall out of the prevailing wind and preferably in a sheltered location to attract common bird species.
- One Schwegler 2FR bat tube or similar suitable bat tube/brick will be installed in the wall of the new building. This box will be located a minimum of 3m from ground level on a south, east or west facing aspect. **The box must not be illuminated directly or indirectly by artificial lighting.** The installation of this box will provide roosting opportunities for a wide variety of common bat species at a site that currently has negligible potential.
- The proposed development will include new boundary markers around the converted building. Any boundary fencing or wall installed will incorporate a ground level hole measuring 13cm by 13cm. The inclusion of a suitably sized hole at ground level will allow small mammals, including hedgehogs, access between gardens and neighbouring fields for foraging and commuting.

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 02.03.21]

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 northeast and south east aspect.



Photograph 2 – View of the soffits on the garage building.



Photograph 3 – View of the large gap at the top of the metal garage door, partially blocked with material internally.



Photograph 4 – View of the window on the southeast aspect.



Photograph 5 – Internal view of the roof structure.

Appendix 3: Site enhancements and suitable locations

Southeast elevation



Example of Schwegler 2FR bat tube and a Schwegler 1FE box (requires a back plate). Both are designed to be incorporated into an external wall.

A minimum of one suitable bat tube/box will be installed on southeast facing aspect for warmth and protection from prevailing wind. Requires no maintenance and can be painted/rendered.

Minimum of one 'bee brick' to be installed in new building. Bricks should be installed on southwest or southeast facing wall for warmth at a minimum of 1m from ground level.

Example of Schwegler bird brick. This or other suitable integrated bird brick/box to be installed in a sheltered location out of the prevailing wind, preferably on the north aspect close to adjacent garden.

Northwest elevation

