
Bat Survey Report

For proposed development at:

Hobbs Farm house
Bilsham Road
Yapton
Arundel
BN18 0JY

Survey and Report by:	19 th August 2018
Tony Hargreaves BSc AIEMA Director	Project Ref: 17186

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The findings of this report are based on the findings of the surveys carried out by Bright Green Environmental as stated and do not prove or disprove the absence or presence of any protected species. Bright Green Environmental cannot be held liable in any way for any legal actions brought against the landowner or developer in connection with this report.

Contents

1. Introduction	4
2. Site Description.....	6
3. Methodology	7
4. Results.....	8
5. Survey Constraints	9
6. Assessment of Impacts	10
7. Conclusion.....	10
8. Recommendations and Mitigation	11
Appendix A - Plans.....	15
Appendix B – Site Photographs.....	17
Appendix C – Survey Plan.....	17
Appendix D – DNA Analysis.....	20

1. Introduction

1.1. Introduction

- 1.1.1 Bright Green Environmental was instructed by Mr. & Mrs. Head to carry out a Preliminary Bat Survey of the property Hobbs Farmhouse, Bilsham Road, Yapton, Arundel BN18 0JY. As required in respect of the proposed development which will involve the conversion of the existing outbuilding onto a residential property.
- 1.1.2 The surveyor is an associate member of the Chartered Institute of Environmental Management and Assessment (AIEMA) and subject to the IEMA Professional Code of Conduct and licensed by Natural England to survey for bats (2016-20863-CLS) and great crested newts (2016-23214-CLS). He has extensive experience in undertaking various ecological surveys on behalf of public and private sector clients, throughout the UK

1.2. Objectives

- 1.2.1 To identify any potential impacts as a result of the proposed development, in particular to identify any bat activity at the property to inform the planning application for the proposed works.

1.3. Legislation and Ecology

- 1.3.1. Bats (all species)
- 1.3.2. All British bats are classed as European Protected Species and therefore received protection The Conservation of Habitats and Species Regulations 2010, making it an offence to:
- Deliberately kill, injure or capture bats;
 - Deliberately disturb bats, including in particular any disturbance which is likely to impair their ability to survive, to reproduce or to rear or nurture their young, or their ability to hibernate or migrate, or which is likely to affect significantly their local distribution or abundance;
 - Damage or destroy a breeding site or resting place of a bat.
- 1.3.3. In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:
- Damage or destroy, or obstruct access to, any structure or place which any bat uses for shelter or protection; or
 - Disturb bats while occupying a structure or place used for that purpose.

- 1.3.4. If proposed development work is likely to destroy or disturb bats or their roosts a license may need to be obtained from Natural England which would be subject to appropriate measures to safeguard bats.
- 1.3.5. The presence of bats does not necessarily mean that development cannot go ahead, but that with suitable, approved mitigation, exemptions can be granted from the protection afforded to bats under regulation 39 by means of a license. Natural England, for the Secretary of State for the Department for Environment, Food and Rural Affairs (DEFRA) is the appropriate authority for determining license applications for works associated with developments affecting bats. In cases where licenses are required, certain conditions should be met to satisfy Natural England. Before a license can be issued to permit otherwise prohibited acts three tests should be satisfied. These are:
1. Regulation 44(2)(e) states that licenses may be granted to ‘preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.
 2. Regulation 43(2)(a) states that a license may not be granted unless Natural England is satisfied ‘that there is no satisfactory alternative’.
 3. Regulation 44(3)(b) states that a license cannot be issued unless Natural England is satisfied that the action proposed ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range’.
- 1.3.6. Natural England expects the planning position to be fully resolved as this is necessary to satisfy tests 1 and 2. Full planning permission, if applicable, will need to have been granted and any conditions relating to bats fully discharged. For test 3, Natural England should be satisfied that sufficient survey effort has been carried out and that the impact assessment and proposed mitigation measures (submitted with the license application) are adequate to maintain the species concerned at a favourable conservation status.

2. Site Description

2.1. Site Description

- 2.1.1. The property consists of a single storey outbuilding with a lean to, to either end.
- 2.1.2. It is constructed of brick and flint beneath a timbered framed roof, with slate tiles sitting directly upon the timber batons.
- 2.1.3. It is set within the residential curtilage of Hobbs Farm; the surrounding landscape is predominately pasture and intensive arable.

Figure 2.1 Aerial image of the site.



3. Methodology

3.1. Walkover Survey

- 3.1.1. A site walkover survey was undertaken of the proposed development area to identify the suitability of the existing habitats for protected species and to identify any signs of protected species.

3.2. Daytime Survey

- 3.2.1. The Bat Conservation Trust (2015) Bat Surveys – Good Practice Guidelines were used as the basis of the survey methodology.
- 3.2.2. A daytime survey of the property was carried out during daylight hours on 16th August 2018. An inspection of the interior and exterior of the property was undertaken for signs of bats. Equipment used included ladders, high power close focus binoculars, high power inspection torch, endoscope, and camera.
- 3.2.3. In examining the buildings for bats, attention was given to any small crevice in which bats may roost such as any cavities within internal and external fixings, often used by bats as roosting sites. Floors and exposed surfaces were inspected for bat droppings, bat urine, feeding remains, oil staining from the fur of bats (indication of frequent use of a site), and wear of substrates caused by the movement of bats in and out over a long period of time.

3.2.4. Activity Surveys

Dusk Emergence Survey

- 3.2.5. The property was surveyed by eye covering the various elevations throughout the survey period. The activity was monitored through the use of a bat detectors (Elekon Batlogger) with digital recording. The purpose of the survey was to identify any access points that may be being utilised by the bats to emerge from the property. Also, to identify the numbers of bats emerging from the property to determine the type of roost and any bat activity around the property.

4. Results

4.1. Daytime Survey

- 4.1.1. There is a scattering of bat droppings throughout the outbuilding. These were of a smooth appearance and fine particle characteristic of Pipistrelle species confirmed as Soprano Pipistrelle through DNA analysis (see appendix C)
- 4.1.2. The slate tiles are tight fitting and offer limited opportunity for bat access. The ridge tiles appear to be in good order and well mortared down.
- 4.1.3. The timbers on the most part do not offer suitable cavities however, there are cross timbers which have traditional mortice joints within them although several of these are largely covered by modern timbers. However, they were clear on the most part of cobwebs indicating that they maybe being disturbed, although no droppings are present to indicate they are used by bats.
- 4.1.4. The main concentration of bat droppings was at the eastern end of the property. Where a small cavity could be seen around the ridge beam into the ridge tile cavity. This is considered likely to be a site of bat roosting.
- 4.1.5. The lean to either side, one is finished in a corrugated sheet tin roof the other in a corrugated cement sheet roof. Neither of these offer suitable opportunities for bats and there were no signs of bats within these sections.
- 4.1.6. The building is considered to offer low roost suitability as only a single point that is found to be a positive roost.
- 4.1.7. The surrounding habitat of arable and grazing fields, divided by hedgerows and mature trees, as well as the pond and older properties in the area are considered to provide suitable roosting and foraging habitat for bats.
- 4.1.8. A bird nest was identified on purlin timbers, currently unoccupied.

4.2. Emergence survey

- 4.2.1. An emergence survey was undertaken by Tony Hargreaves 2016-208363-CLS and an experience assistant surveyor using automated Elekon Batlogger detectors on 12th September 2018.
- 4.2.2. The Survey commenced at 1920 and ended at 2110 Sunset was at 1936. During the survey the temperature 16°C dropping to 14°C at the end of the survey. The weather was dry, clear and still air, preceded by rain in the afternoon.
- 4.2.3. Notes and Observations;
- 19.45 – One Soprano pipistrelle seen emerging from beneath a ridge tile and foraging around the court yard and within the stables.
- 19.49 – Soprano pipistrelle seen foraging around garden between house and stables.
- 19.52 – Common pipistrelle foraging around trees to the north.
- 19.59 Brown long eared foraging around courtyard
- 20.10 – Common and Soprano pipistrelle seen foraging around mature trees along drive.
- 20.18 – Common pipistrelle foraging around the courtyard, trees and farmhouse.
- 20.43 – Common pipistrelle foraging around the courtyard, trees and farmhouse.
- 2110 – End of survey
- 4.2.4 A number of common and soprano pipistrelles were seen foraging around the pond and mature trees to the front of Hobbs Farmhouse whilst leaving the site.
- 4.2.5 During the activity survey a hedgehog was seen walking through the site. Therefore, it is recommended that should any excavations be necessary through the course of the project that an escape ramp be installed, they are left open for a minimal amount of time, inspected each day they are left open, inspected prior to infilling.

5. Survey Constraints

- 5.1.1 Bats are difficult to locate in large structures, with so many potential roosting areas, finding the exact roosting site can be difficult, especially male/single bat roosting sites.
- 5.1.2 Bats can have seasonal use of buildings and being so mobile may arrive and start using a site after it has been surveyed, or roost somewhere else during the period it was surveyed. For this reason, bats may potentially be present but remain undetected, particularly during day time assessment surveys.

6. Assessment of Impacts

- 6.1.1. The proposed development involves the conversion of the building to residential. It is assumed that within the scope of works the roof will be required to be removed. Felt or membraned insulated, then re-tiled. The proposed works would have an impact on any bats roosting or maybe roosting beneath ridge tiles and also impact on this as a bat roost. Therefore, further surveys were considered necessary.
- 6.1.2. The surveys have confirmed that a ridge tile is used by a single soprano pipistrelle bat. It is likely that this is a summer day time roost.
- 6.1.3. The works providing, they are appropriately managed through a method statement and provision is retained beneath the ridge tile will not adversely impact upon the individual bat, and the roost will not be destroyed.

7. Conclusion

- 7.1.1. The internal/external and activity surveys have confirmed that a ridge tile is used by a single soprano pipistrelle bat. It is likely that this is a summer day time roost.
- 7.1.2. It is not considered suitable to be a maternity roost and there is no evidence to support this level of use.
- 7.1.3. Being a ridge tile on an exposed roof it is not considered suitable for use as a hibernation roost due to its exposure its temperature would not be constant during the winter months.
- 7.1.4. Providing a suitable precautionary method statement is adopted as detailed in section 7. The proposed works are considered unlikely to disturb bats and will not result in the destruction of a known roost and will therefore not result in a breach of the legislation affording bats protection as outlined below.
- 7.1.5. All British bats are classed as European Protected Species and therefore received protection The Conservation of Habitats and Species Regulations 2010, making it an offence to:
- Deliberately kill, injure or capture bats;
 - Deliberately disturb bats, including in particular any disturbance which is likely to impair their ability to survive, to reproduce or to rear or nurture their young, or their ability to hibernate or migrate, or which is likely to affect significantly their local distribution or abundance;
 - Damage or destroy a breeding site or resting place of a bat.

7.1.6. In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Damage or destroy, or obstruct access to, any structure or place which any bat uses for shelter or protection; or disturb bats while occupying a structure or place used for that purpose.

8. Recommendations and Mitigation

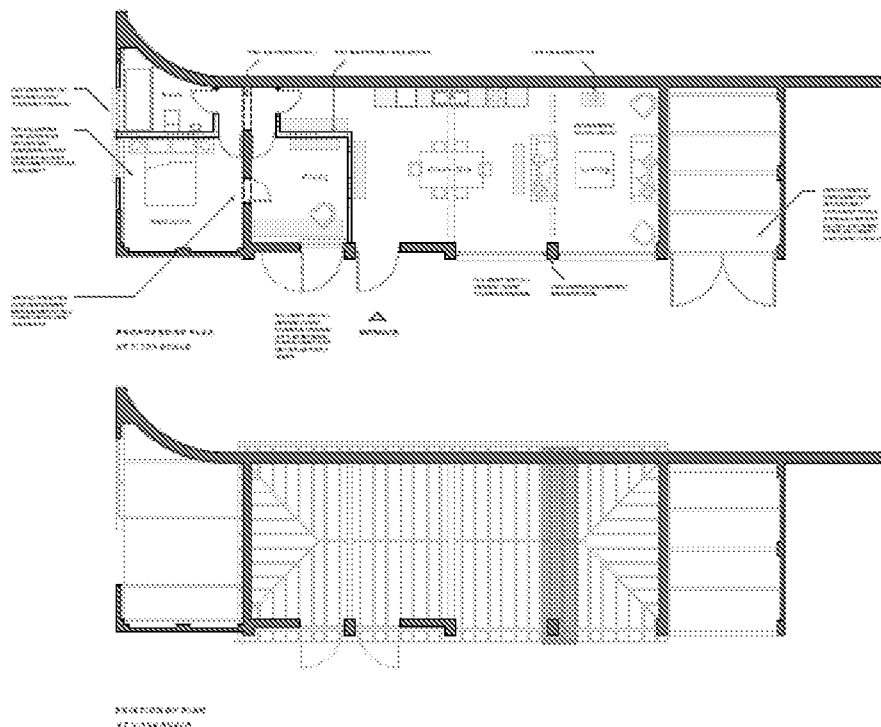
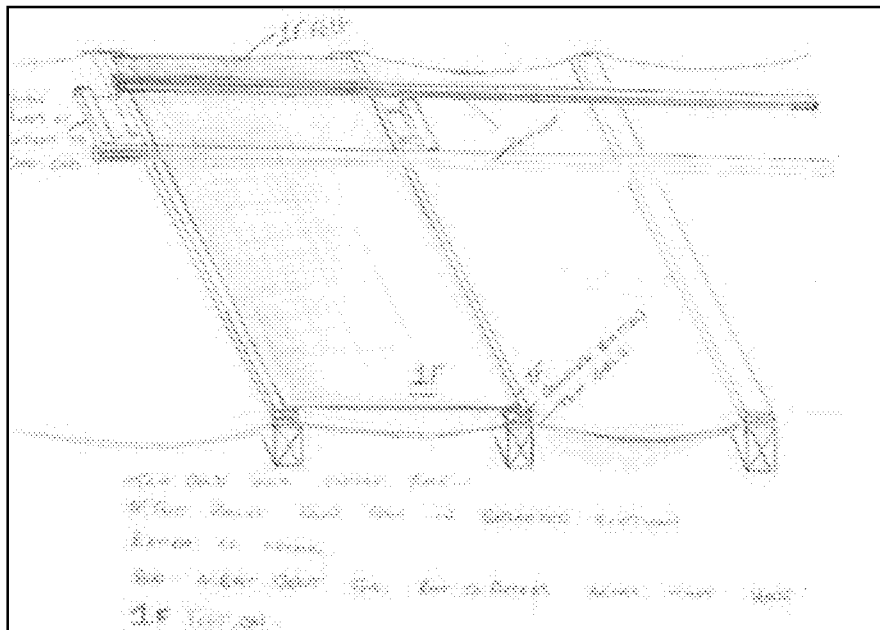
8.1.1. The following is a recommendation for the method of working to avoid a breach of legislation, to avoid disturbing any bats and avoid destruction of a roost.

- **Timing**
Soft demolition (soft strip) works involving those areas potentially used by bats (roof tiles) must either take place between November to February during the hibernation season when bats are unlikely to use the ridge tile as a roost. Or between March to October, during which time the soft demolition must be preceded by a dawn entry survey to ensure bats have not entered the property.
- **Supervision (Watching Brief)**
The removal of all ridge tiles must be carried out by hand (Soft Strip) under the direct supervision of a licensed bat worker.
- **Toolbox Talk**
A 'toolbox talk' of all site workers will be carried out prior to the commencement of works to inform workers of the potential presence of bats in the property, their protection and the procedure to follow for the careful removal of all tiles.
- **Provision of Temporary Bat Boxes**
The provision of bat boxes on the site away from the disturbance of the building works will be required to house any bats discovered during the works.
- **Discovery of a Bat**
If during the soft strip a bat is discovered works must cease and it will be left in situ if safe to do so, or if in harm's way it will be extracted by a licensed bat handler, placed into a bag then carefully placed into a suitable bat box erected at the site.

- Continued Provision of Bat Roost

The proposed development will retain opportunities for Soprano Pipistrelle bats and other crevice dwellers to continue to roost. It is proposed that the identified ridge tile void used as a roost is retained. The proposed method for this is to provide at least 1 traditional felted section over the roof between 2 rafters. An access gap will be provided into the ridge through a gap in the mortar or a special ridge bat tile. Sections of battens are used to prevent any bats migrating along the roof to where woven type membranes are used.

Figure 8.1 Proposed continued roost provision.



8.1.2. To minimise risk of disturbance to potential foraging and commuting bats, during and post development, any external lighting should be minimised as follows:

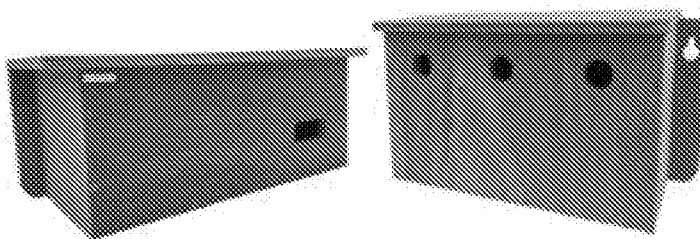
- Any task lighting (during construction) or security lighting on the new building, should not be directed at boundary vegetation, trees or the river banks (particularly to the southern boundary which adjoins woodland).
- Any necessary security lighting should be set on short timers and be sensitive to large moving objects only.
- Other lighting around the site should be kept to the minimal feasible level and be directed downward and shielded to minimise light spillage.
- Hoods, cowls or directional lighting should be used to avoid light directed at the sky or towards boundary vegetation.
- Lighting times should be limited, to provide dark periods.
- The brightness of the lamps should be kept as low as feasibly possible (ILE/BCT, 2007; BCT interim guidance 2014).

8.1.3. To prevent harm to Hedgehogs as one was seen during the activity survey it is recommended that should any excavations be necessary through the course of the project that an escape ramp be installed, they are left open for a minimal amount of time, inspected each day they are left open, inspected prior to infilling.

8.1.4. To prevent harm to birds it is recommended that works commence outside of the bird breeding season (1st March to 31st August). If this is not possible then a pre-works inspection for any nesting activity should be carried out, should any nesting activity be identified works in those areas must wait until the nesting season is over and the birds have fledged.

8.1.5. It is recommended that some inclusion of bird boxes on trees or the building be incorporated into the final scheme such as those in figure 8.2.

Figure 8.2 Suitable bird boxes swift and sparrow terraces.



If you require any further information in relation to the ecology of the site please do not hesitate to contact me.

Survey Conducted and Report written by

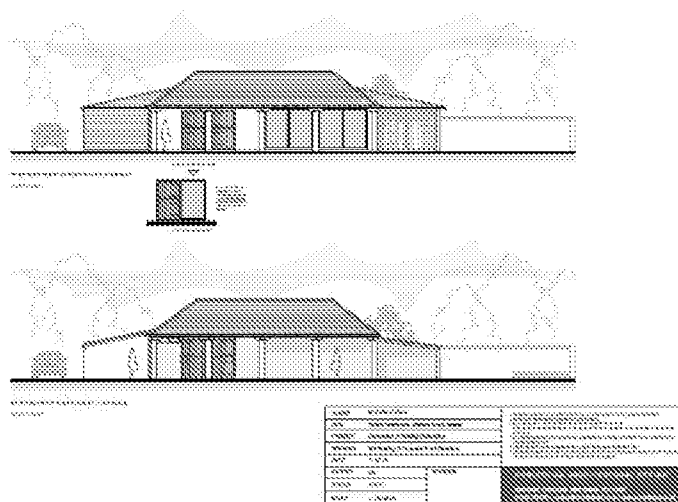


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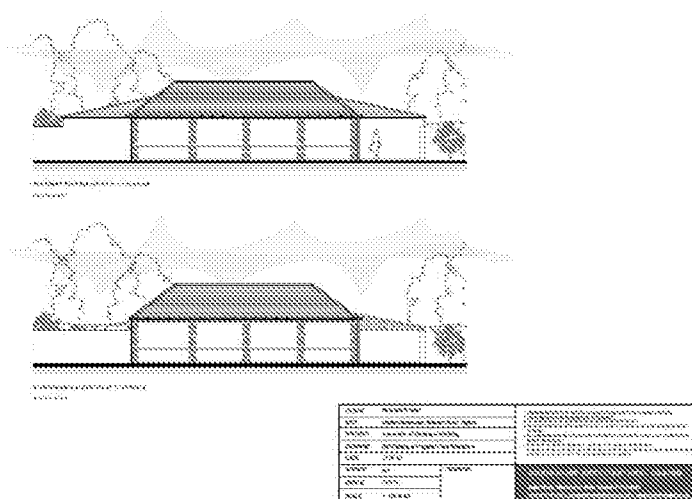
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Appendix A - Plans

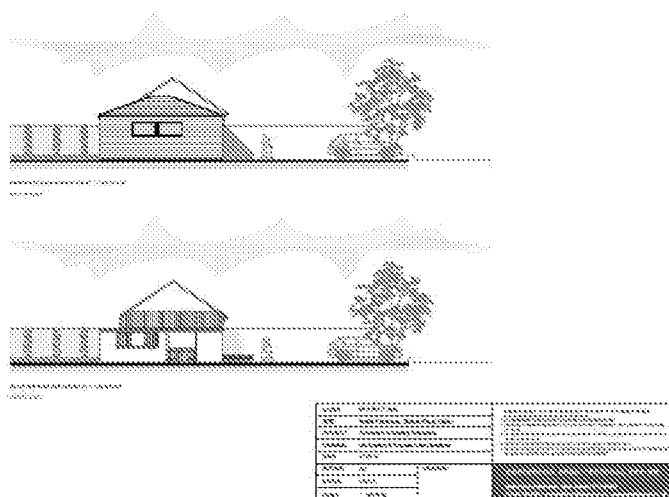
i. Front elevations



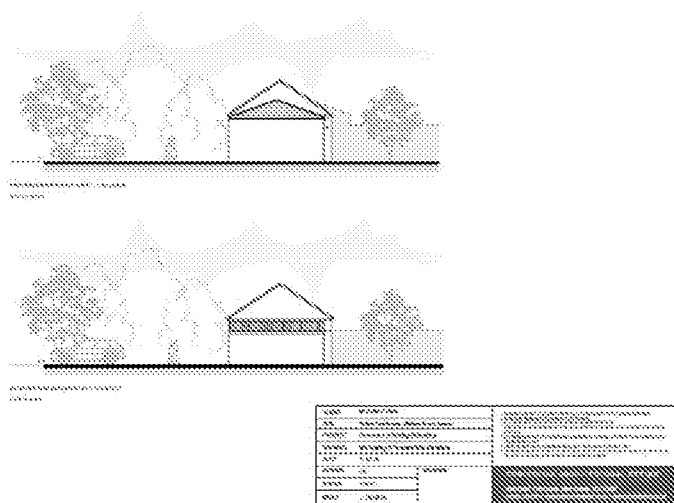
ii. Rear elevations



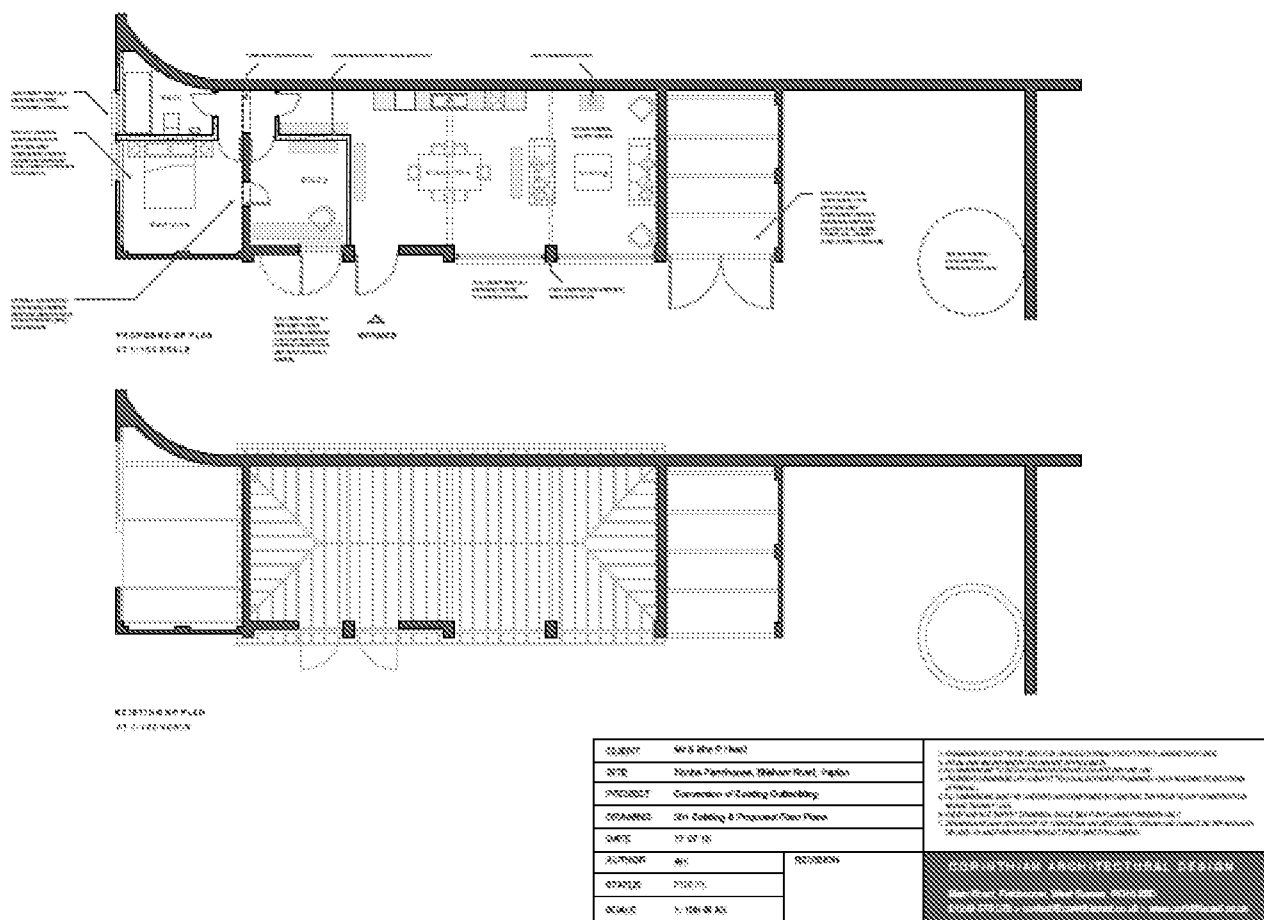
iii. Side elevations



iv. Side elevations



v. Existing Ground floor plan



Appendix B – Site Photographs

Front (north) elevation



Front (north) and end (west) elevation



Side (east) elevation



Rear (south) and side (east) elevation



Interior of side (east) lean to.



Interior of side (west) lean to



Interior of barn with exposed slate tiles



Scattering of small number of droppings on car cover.



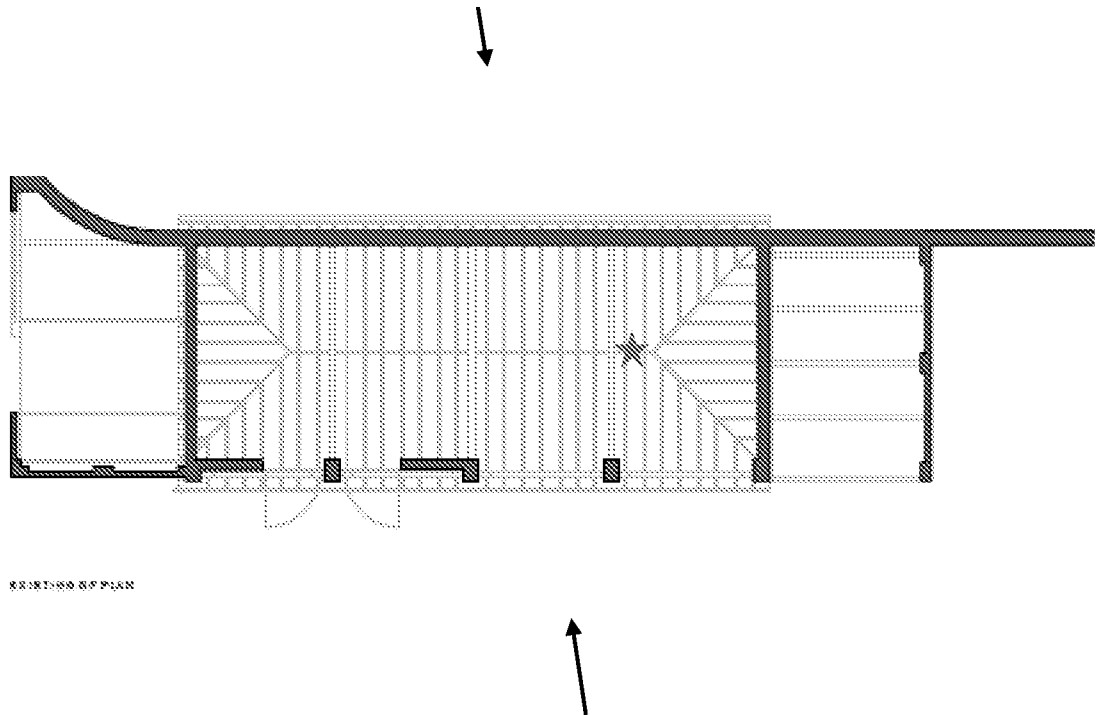
Old mortice tenon joint partly obstructed by modern timber.



Bird nest on purlin timber.



Appendix C – Survey Plan



Key:

-  Denots location of main concentrations of droppings
-  Surveyor position

Appendix D – DNA Analysis



13 September 18

Re: Identification Results for Tony Hargreaves, Bright Green Environmental Consultancy Ltd.

Job number 12665, received 28 August 2018

Sample labelled: BGGU17194, Hobbs Farm, Beneath ridge tile

PCR amplification successful. DNA sequence:

ATGACAAACATTTCGAAAGTCCCACCCCCTGATCAAAATCATCAATAACTCATTATTG
ATTACCAGCTCCATCAAACATTTTCAGCATGATGAAATTTTGGGTCCCTATTAGGCAT
C

Phylogenetic analysis identification: *Pipistrellus pipistrellus*

Confirmed by maximum likelihood, maximum parsimony, bootstrap 100%.

Best regards,

Professor Robin Allaby

The results and conclusions in this report are based on an investigation of mtDNA sequence analysis. The results obtained have been reported with accuracy. The interpretation represents the most probable conclusion for the DNA sequence obtained rather than the sample provided given current levels of species data. It should be borne in mind that different circumstances might produce different results. Therefore, care must be taken with interpretation of the results especially if they are used as the basis for commercial recommendations.

Professor Robin Allaby

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