



# **Protected Species Survey and Ecological Mitigation Method Statement**

**East Hele Farm, Buckland Brewer**

Client: Mr H. Brown

Date: March 2021



<b>Report version</b>	<b>Report date</b>	<b>Author</b>	<b>Checked and approved by</b>
1.0	March 2021	William Dommett MSc MCIEEM	Richard Green BSc (Hons) CEnv MCIEEM

**Survey date:** 08/10/2020

Richard Green Ecology Ltd has prepared this report in accordance with the instructions of their client, the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing and CIEEM Code of Professional Conduct. It is for the client's sole and specific use. Any other persons who use any information contained herein do so at their own risk.

BS 42020:2013 Biodiversity - Code of practice for planning and development states, '*ecological information should be sufficiently up to date (e.g., not normally more than two/three years old, or as stipulated in good practice guidance)*'.

Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> Edt.) states, '*Ideally, (bat) survey data should be from the last survey season before a planning or licence application is submitted, although often data older than this can have considerable value*'.

Therefore, this report may not be considered valid more than three years after survey was undertaken, and advice should be taken on validity after one year.

This report has been produced using all reasonable skill and care. Opinions are provided in good faith.

© Copyright Richard Green Ecology Ltd 2021.

# Contents

## Executive summary

## Wildlife Checklist

<b>1</b>	<b>Introduction</b>	<b>1</b>
	1.1 <i>Introduction</i>	1
	1.2 <i>Planning considerations</i>	1
<b>2</b>	<b>Methods</b>	<b>2</b>
	2.1 <i>Desk study</i>	2
	2.2 <i>Field survey</i>	2
<b>3</b>	<b>Survey Results</b>	<b>3</b>
	3.1 <i>Desk study</i>	3
	3.2 <i>Field survey</i>	3
	3.3 <i>Protected species</i>	5
<b>4</b>	<b>Assessment, recommendations and mitigation</b>	<b>5</b>
	4.1 <i>Bats</i>	5
	4.2 <i>Nesting birds</i>	6
<b>5</b>	<b>Ecological Mitigation Method Statement</b>	<b>6</b>
	5.1 <i>Background</i>	6
	5.2 <i>Bats</i>	7
	5.3 <i>Nesting birds</i>	10
<b>6</b>	<b>Conclusion</b>	<b>10</b>
<b>7</b>	<b>References</b>	<b>10</b>
<b>8</b>	<b>Figures</b>	<b>12</b>
<b>9</b>	<b>Annexes</b>	<b>16</b>
	A <i>Photographs</i>	16
	B <i>Legislation</i>	21
	C <i>DNA analysis</i>	23
	D <i>Induction sheet</i>	24

## Executive summary

It is proposed to extend an existing building at East Hele Farm, Buckland Brewer, Devon, EX39 5LZ, NGR SS 42903 19001.

A preliminary ecological appraisal, consisting of a daytime visual inspection for bats and nesting birds, was undertaken on the 8<sup>th</sup> October 2020 by Richard Green Ecology Ltd.

Two pipistrelle bat droppings were found on the north external gable wall below a crevice, and approximately 30-50 bat droppings (in total - identified by DNA analysis) from common pipistrelle, whiskered and brown long-eared bats were found inside the loft of the building.

A mitigation strategy has been developed for the proposed extension, assuming a worst-case scenario, i.e., assuming a breeding roost of common pipistrelle, whiskered and brown long-eared bats is present within the building. Assuming the mitigation is provided as detailed within the method statement, it is considered that the mitigation measures would be suitable to maintain the favourable conservation status of all bat species using the building and would satisfy the requirements of a Natural England bat mitigation licence application.

A dedicated bat loft suitable for use by breeding common pipistrelle, whiskered and brown long-eared bats (and for other bat species) will be provided above a new log store. The bat loft will measure 6 m (W) by 6 m (L) by 2.8 m (H). The loft will be constructed with an uncluttered roof void, i.e., not using trussed rafters. The roof will be covered in natural slate tiles and lined with bituminous type 1F felt. Bat access and additional roosting provision will also be provided using a range of features. A detailed mitigation method statement is provided in section 5.

In order to characterise the bat roost, i.e., species, numbers present and type of use (e.g., maternity or day roost) and to inform a licence application, at least two bat emergence surveys undertaken between May and August will be required, in accordance with Bat Conservation Trust (BCT) guidelines (Collins, 2016) and Natural England standing advice.

Bats would still have access to a large part of the existing roof and would be provided with a bespoke loft with numerous access points and roosting areas. If the existing building is only a day roost used by a small number of bats, the proposed bat loft will result in an enhancement for bats in the local area by providing them with additional roosting opportunity.

The proposed extension should only commence once a European protected species licence (EPSL) from Natural England has been issued. One can only apply for an EPSL once planning approval has been granted and any conditions pertaining to protected species, which are capable of being discharged, have been discharged.

# Wildlife Checklist

Protected and priority species (Grid reference of site: NGR SS 42903 19001)

Species - terrestrial, intertidal, marine	Walkover shows that suitable habitat present and reasonably likely that the species will be found? <u>Yes or No</u>	Detailed survey needed to clarify impacts and mitigation requirements?	Detailed survey carried out and included?	Species Present or Assumed to be present on site <u>Indicate with P or A and name the species</u>	Impact on species?	Detailed Conservation Action Statement included?  Sets out actions needed in relation to avoidance / mitigation / compensation / enhancement	EPS licence required?
Bats (roost)	✓	✓	Preliminary Assessment & DNA analysis of droppings	P – Common pipistrelle, whiskered and brown long-eared	Modification/potential loss of roosts	✓	✓
Bats (flight line / foraging habitat)	✓	✓	x	A	Not if recommendations followed	✓	x
Dormice	x						
Otters	x						
Great crested newts ( <i>*check consultation zone</i> )	x						
Cirl buntings ( <i>*check consultation zone</i> )	x						
Barn owls	x						
Other Schedule 1 birds	x						
Breeding birds	✓	✓	✓	Historic evidence	Not if recommendations followed	✓	x
Reptiles	x						
Native crayfish	x						
Water voles	x						
Badgers	x						
Invasive species	x						

## Designations / important habitats

Designation	Within site or potential impact. <u>Yes or No</u>	Name of site / habitat	Detailed Conservation Action Statement included in report?	Relevant organisation consulted & response included in the application?
<b>Terrestrial, intertidal, marine</b>				
<b>Statutory designations</b>				
European designations - Special Area of Conservation (SAC), Special Protection Area (SPA) and RAMSAR site or within Greater Horseshoe consultation zone	x			
Site of Special Scientific Interest (SSSIs)	x			
Marine Conservation Zone (MCZ) (not before 2012)	x			
Local Nature Reserve (LNR)	x			
<b>Non statutory wildlife designations</b>				
County Wildlife Site (CWS)	x			
Ancient woodland	x			
Special Verge	x			
Habitat of Principal Importance / BAP habitat	x			
Local Biodiversity Network (mapped by Devon Wildlife Trust / through Green Infrastructure work)	x			

# 1 Introduction

## 1.1 Introduction

It is proposed to extend an existing building at East Hele Farm, Buckland Brewer, Devon, EX39 5LZ, NGR SS 42903 19001. The extension would join into the east elevation of the existing building, affecting approximately one third of the roof on that elevation, including removal of two existing dormers.

A preliminary ecological appraisal, consisting of a daytime visual inspection for bats and nesting birds, was undertaken on the 8<sup>th</sup> October 2020 by Richard Green Ecology Ltd.

This report includes the findings of the survey and makes recommendations for further survey, and details ecological mitigation and enhancement, in accordance with national and local planning policy and BS 42020:2013 Biodiversity - Code of practice for planning and development.

## 1.2 Planning considerations

### 1.2.1 National Planning Policy Framework (NPPF), February 2019

The National Planning Policy Framework (February 2019) outlines the Government's commitment to protect and enhance sites of biodiversity value, and minimise impacts on and provide net gains for biodiversity, including the principle of refusing planning permission if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for.

### 1.2.2 North Devon & Torridge Local Plan 2011-2031

The North Devon & Torridge Local Plan 2011-2031 (adopted in October 2018) contains the following relevant policy:

Policy ST14: Enhancing Environmental Assets

The quality of northern Devon's natural environment will be protected and enhanced by ensuring that development contributes to:

(a) providing a net gain in northern Devon's biodiversity where possible, through positive management of an enhanced and expanded network of designated sites and green infrastructure, including retention and enhancement of critical environmental capital;

(c) conserving European protected species and the habitats on which they depend;

(e) conserving the setting and special character and qualities of the North Devon Coast Areas of Outstanding Natural Beauty whilst fostering the social and economic well being of the area;

(g) protecting and enhancing local landscape and seascape character, taking into account the key characteristics, the historical dimension of the landscape and their sensitivity to change;

(i) conserving and enhancing the robustness of northern Devon's ecosystems and the range of ecosystem services they provide;

(k) meeting the Nature Improvement Area's strategic objectives; and

## 2 Methods

### 2.1 Desk study

#### 2.1.1 Sites of importance for nature conservation

A search for sites designated for nature conservation and any notable habitats was undertaken on the DEFRA Magic website (<http://magic.defra.gov.uk>). This resource includes statutory designated sites (e.g. Sites of Special Scientific Interest, SSSIs) and Biodiversity Action Plan (BAP) habitats. As impacts outside of the site are limited, only sites within 500 m of the site are noted.

#### 2.1.2 Protected species

Given the small extent and limited effects of the proposal, it is considered that any protected species outside the site would be unaffected. As a detailed survey has been undertaken and any protected species present or potentially present on the site would have been identified, it was not considered necessary to obtain any species records from a local records centre.

### 2.2 Field survey

#### 2.2.1 Bat and bird survey - visual inspection

The survey involved a thorough visual inspection of the building for any signs of protected species. A search for characteristic signs of bats was made, such as droppings, feeding remains, staining, and any bats present. A search was also made for any signs of bird nesting activity.

Equipment used and at hand included: Nikon 10x close-focusing binoculars, Lightway BMFL1265 720 lumen torch, Lightway 160 lumen torch, Ridgid Micro CA-300 inspection camera and a 3.8 m extendable ladder.

The survey was undertaken by William Dommett on 8<sup>th</sup> October 2020, during the daytime. The weather was cloudy with light rain and light wind. The temperature was approximately 13°C.



### 2.2.2 Personnel

William Dommett holds Natural England scientific licences to disturb bats [2015-2015-15554-CLS-CLS] and barn owls [CL29/00117] and is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).

### 2.2.3 Survey limitations

There was a water tank in the loft which prevented human access to the north section of the loft.

## 3 Survey Results

### 3.1 Desk study

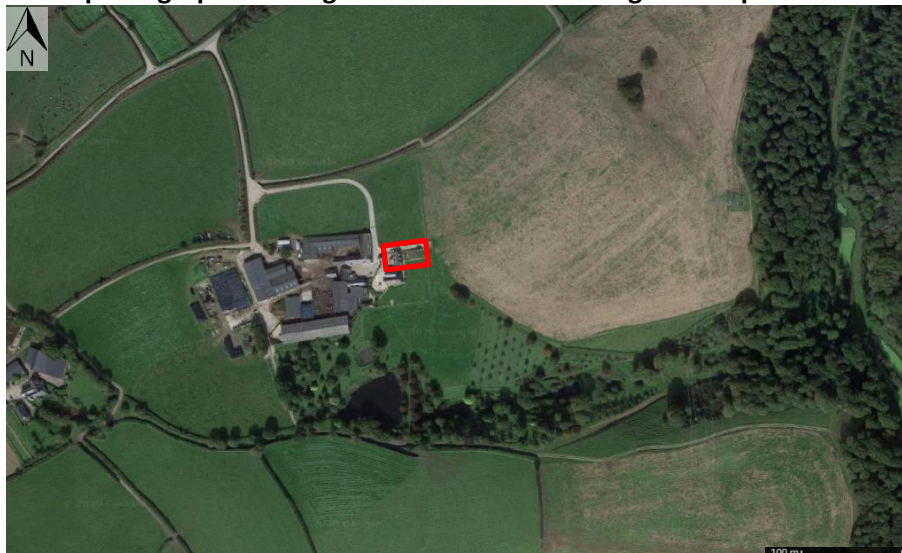
The site is not within any statutory designated sites of nature conservation importance and there are no statutory designated sites of nature conservation importance within 500 m of the site.

### 3.2 Field survey

#### 3.2.1 Habitats

East Hele Farm is located approximately 2 km south-east of Buckland Brewer. The site consisted of a farm with various buildings and areas of hardstanding surrounded by fields of pasture and a mature garden with large ponds and trees to the south and east. The proposed development site consisted of a two-storey building surrounded by hardstanding, lawn and a vegetable patch. The wider landscape consisted of agricultural fields and hedgerow boundaries and West Hele Woods, an area of ancient semi-natural woodland, approximately 300 m east of the site.

#### Aerial photograph showing the site and surrounding landscape



Close-up aerial photograph showing the site and building surveyed



### 3.2.2 Building



The building was constructed from stone and brick. It had a natural slate tile roof lined with bituminous type 1F felt. There were pitched dormers on the east and west slopes of the roof.

There was potential access for bats into the roof through gaps above gable wall tops and where the dormers intersect the roof.

### **3.3 Protected species**

#### **3.3.1 Bats – visual inspection**

Two pipistrelle bat (*Pipistrellus* sp.) droppings were found on the external north gable wall below a crevice. There was also another gap above the north gable wall with no cobwebs over it, indicating a potential access point for bats into the roof.

Approximately 30-50 bat droppings (in total) from common pipistrelle (*Pipistrellus pipistrellus*), whiskered (*Myotis mystacinus*) and brown long-eared (*Plecotus auritus*) bats (identified by DNA analysis – refer to Annex C) were found in the southern part of the loft.

#### **3.3.2 Nesting birds**

Some historic bird nest material, potentially from house sparrow (*Passer domesticus*), was found in the south-east dormer loft.

## **4 Assessment, recommendations and mitigation**

### **4.1 Bats**

#### **4.1.1 Overview of legislation protecting bats**

British bat species are protected under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017 (as amended). This makes it an offence to kill or injure bats or damage or destroy a place of shelter or protection (see Annex B for more details).

#### **4.1.2 Preliminary evaluation**

The amount of bat droppings found within the loft suggests that the building is, at least, used as a day roost by common pipistrelle, whiskered and brown long-eared bats.

As the survey was undertaken outside of the optimal survey period for breeding bats (May-August), given the number of bat droppings found, and that no bat emergence surveys have been undertaken, it cannot be confirmed whether the building is used as a maternity roost or not.

The building is not a typical hibernation roost, i.e., it does not have high humidity or a constant winter temperature, although bats may roost in unseen locations during mild spells during the winter.

#### **4.1.3 Impact**

The extension to the building would result in the modification and potential loss of common pipistrelle, whiskered and brown long-eared bat roosts. The works could also potentially result in bats being disturbed, injured or killed during works. The

proposed works would therefore require a European protected species licence (EPSL) from Natural England. An EPSL can only be applied for once planning permission has been granted.

#### **4.1.4 Further survey**

To adequately assess the use of the building by bats, i.e., species, numbers present and type of use (e.g., maternity or transitional) and to inform a planning and licence application, it is recommended that at least two bat emergence surveys be undertaken between May and August in accordance with Bat Conservation Trust (BCT) guidelines (Collins, 2016) and Natural England standing advice.

## **4.2 Nesting birds**

### **4.2.1 Overview of legislation regarding birds**

The Wildlife and Countryside Act 1981 (as amended) states that it is illegal to take, damage or destroy the nests of wild birds whilst being built or in use. However, it is not an offence to carry out work in areas that they use, outside of the nesting period (see Annex B for more details).

### **4.2.2 Impacts**

No recent evidence of nesting bird use was found, and it is considered unlikely that the proposed extension would have an impact on nesting birds following construction, as the south-east dormer would remain unaffected. However, if nesting birds returned to the building they could be at risk from disturbance during construction.

# **5 Ecological Mitigation Method Statement**

## **5.1 Background**

A mitigation strategy is proposed for extending the building, assuming a worst-case scenario, i.e., assuming a breeding roost of common pipistrelle, whiskered and brown long-eared bats are using the building. Assuming the mitigation is provided as detailed within this method statement, it is considered that the measures would be suitable to maintain the favourable conservation status of any likely bats using the building and would satisfy the requirements of a Natural England bat mitigation licence application.

The proposed works should only commence after a European protected species licence (EPSL) from Natural England has been issued.

## **5.2 Bats**

### *5.2.1 Timing of works*

Should a maternity roost be confirmed in the building (by bat emergence surveys), no works affecting the roof will be undertaken in the breeding period for bats (May-September), i.e., roof removal to be undertaken between October and April.

If there is no maternity roost, there would be no seasonal restrictions on when the roof could be removed to join in the extension, assuming an EPSL is in place and the replacement bat loft is provided.

### *5.2.2 Pre-commencement of works/toolbox talk*

Before commencing works, contractors will be inducted by the named Ecologist<sup>1</sup> to make them aware of the possible presence of bats, their legal protection and of working methods to avoid harming bats. A written record of this must be kept. Refer to Annex D.

### *5.2.3 Watching brief*

An immediate inspection of the accessible spaces should precede the removal of the roof structure. The roof must be removed by hand under ecological supervision.

Any bats found during the pre-inspection/watching brief should be taken by thin-gloved hand, placed in a draw-string cotton bag and held in a cool dark wooden box until the work is complete (within the same day), to avoid bats flying back to their roosting locations.

At the end of the working day, any bats found should be moved into the pre-constructed bat house.

Although not expected, and never encountered by Richard Green Ecology Ltd on such projects, any injured bats should be immediately taken into care (as directed by BWM, s. 73, pp. 64-66; 3rd ed. 2004).

If a bat is discovered at unsupervised times, work should cease immediately, and the name Ecologist called for advice. This advice would include leaving the bat to disperse of its own accord or waiting for the named Ecologist to arrive and move the bat. Builders and contractors are explicitly forbidden from handling bats.

### *5.2.4 Mitigation measures*

Bat mitigation measures suitable for breeding common pipistrelle, whiskered and brown long-eared bats (and suitable for use by other crevice dwelling bat species)

---

<sup>1</sup> A professional ecological consultant who is responsible for undertaking/overseeing works undertaken in respect of works under an EPSL.

would be provided above a new log store located 7 m north of the existing building. Refer to Figures 1-3 and details below:

- A dedicated loft space/bat roost 6 m (W) by 6 m (L) by 2.8 m (H) will be created above a new log store. The loft will be constructed with an uncluttered roof void, **i.e., not using trussed rafters.**
- The roof will be lined using bituminous type 1F roofing felt and covered in natural slate tiles. The roof slopes will have a north/south orientation ,i.e., the ridge would be on a east/west orientation, to maximise solar gain.
- The log store will be of timber construction covered in waney edge horizontal timber cladding. No breathable roofing membrane will be used to line the cladding. 20 mm gaps will be provided under the third row of the cladding (from the ridge) to provide crevices for bats. Over time, the weather boarding will naturally warp to provided additional crevices and potential bat access locations.
- The first rafters inside the roost (off the gables) will be set at least 20 mm off the internal gable walls to allow bat to access the inside of the roost from above the gable wall tops. The bat roost will have rough sawn timber rafters and a ridge board for bats to roost against.
- A 500 mm x 500 mm loft hatch will be provided to allow periodic inspections inside the loft and prevent storage of large items inside the loft.
- Two lead (Code 6 minimum) bat slates will be installed by the ridges on the south and north slopes of the roof. Bat slates will provide access for crevice dwellings bats between the slate tiles and bituminous type 1F felt (north part of the roof) and into the bat loft (south part of the roof).
- The ridges will be bedded using mortar (around the edges) and mechanically fixed, in accordance with BS 5534. **A ‘dry fixed’ ridge system is not suitable for use, as they use a strip of breathable membrane and provide a draughty environment.**
- Access will be provided under 1 no. ridge tile, with an access gap of 40 mm wide by 15mm high, to provide a roosting area for bats under the tile.
- Bat access for bats will be provided above the east and west gables behind the cladding, and under the northern eaves. Bat access points would be a minimum of 25 mm wide by 150 mm long at regular intervals along the gable wall tops and the northern eaves. The horizontal cladding will not be cut flush with the slope of the roof, and there will be 20 mm gaps either end



to allow bats to crawl behind the cladding. Timber bargeboards will cover the gable ends but allow bats to access the gaps behind them.

- Crevices for bats will be provided inside the loft using four rafter crevices. 1 m long rough-sawn timber planking will abut the type 1F felt and be set off from the rafters by 30 mm on the lower part of the rafter to form triangular crevices for bats to roost against underside of the roof.
- One squeeze box constructed from Oriented Strand Board (OSB) will be provided in the centre of the bat loft. The end section will consist of a piece of triangular OSB 1000 mm (H) extending down from the ridge and across the width of the roof. The front section will consist of a piece of triangular OSB 750 mm (H) extending down from the ridge and extending across the width of roof. The front and back sections will be spaced apart using 20 mm battens along the diagonal edges, creating a 20 mm wide void for bats.
- The ground floor of the log store will be open-fronted. This will also provide an area for bats to night roost.
- No external lighting will be installed around the log store and no lighting will be provided inside the bat loft.
- As the roof of the new extension will be lined with a breathable membrane, bat access into this roof space will be blocked from the main loft using boarding to ensure that bats do not come into contact with the breathable membrane, as they can become entangled and trapped in frayed fibres.

**Under no circumstances will a breathable roofing membrane be used to line the roof or cladding of the bat loft.** This includes the use of TLX Batsafe breathable roofing membrane, which claims it is safe for use in bat roosts. There is no substantiated test data to verify the use of TLX Batsafe in bat roosts.

The Bat Conservation Trust (BCT) and Natural England's (NE) position is that Breathable Roofing Membranes (BRMs), made from spun-bond polypropylene/polyethylene filaments, should not be installed into a roof that is used by bats. The long fibres that make up BRMs have a tendency to be pulled out by roosting bats and pose an entanglement threat to the bats. BRMs are not obligatory under any Building Regulations. Ventilation, regardless of the roofing felt or BRM used, is still required (see British Standard BS 5250:2011).

The only 'bat safe' roofing membrane is bitumen 1F felt that is a non-woven short fibred construction.

#### 5.2.5 *Enhancement*

Two bat tubes, e.g., Cambrian Conservation BT10 (or similar), will be installed into the east and west gables of the bat loft as an enhancement for bats.

### 5.3 *Nesting birds*

#### 5.3.1 *Mitigation*

A check will be made for any nesting birds (if works are undertaken between March and September) prior to any works to the building. If nesting birds are found, any works affecting the nesting locations, will be delayed until the birds have fledged.

## 6 Conclusion

The proposed extension would result in the modification of a bat roost used by at least three bat species. Insufficient survey has been undertaken at this time to adequately categorise the roost, e.g., determine how many bats use it and whether it is a breeding/maternity roost. Therefore, a detailed assessment of impacts cannot yet be made. However, mitigation is proposed that would maintain the conservation status of all species in any eventuality, including a worst-case scenario, i.e., even if a breeding/maternity roost is present.

Bats would still have access to a large part of the existing roof and would be provided with a bespoke loft with numerous access points and roosting areas. If the existing building is only a day roost used by a small number of bats, the proposed bat loft will result in an enhancement for bats in the local area by providing them with additional roosting opportunity.

A European protected species licence will be required to undertake the works to the existing roost. This can only be applied for after planning permission has been granted.

## 7 References

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> Edt.). The Bat Conservation Trust, London.

GOV.UK (2019). *Bats: surveys and mitigation for development projects*; <https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects>

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature.

Mitchell-Jones, A.J. & McLeish, A.P. (2004). *Bat Workers' Manual – Third Edition*. Joint Nature Conservation Committee.





## 8 Figures



Figure 1 – Bat loft and mitigation design (refer to separate PDF for high resolution)

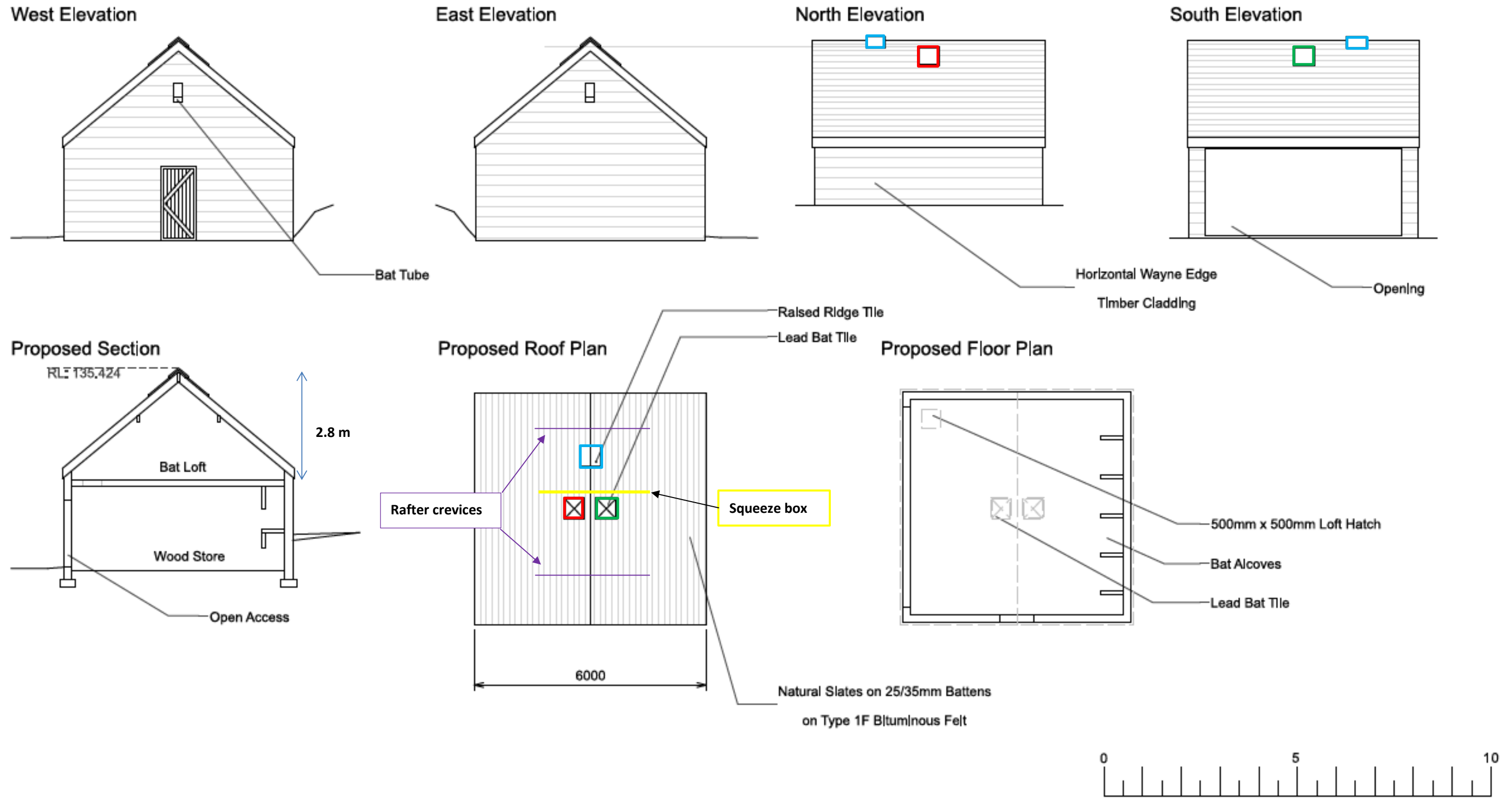


Figure 2 – Mitigation features

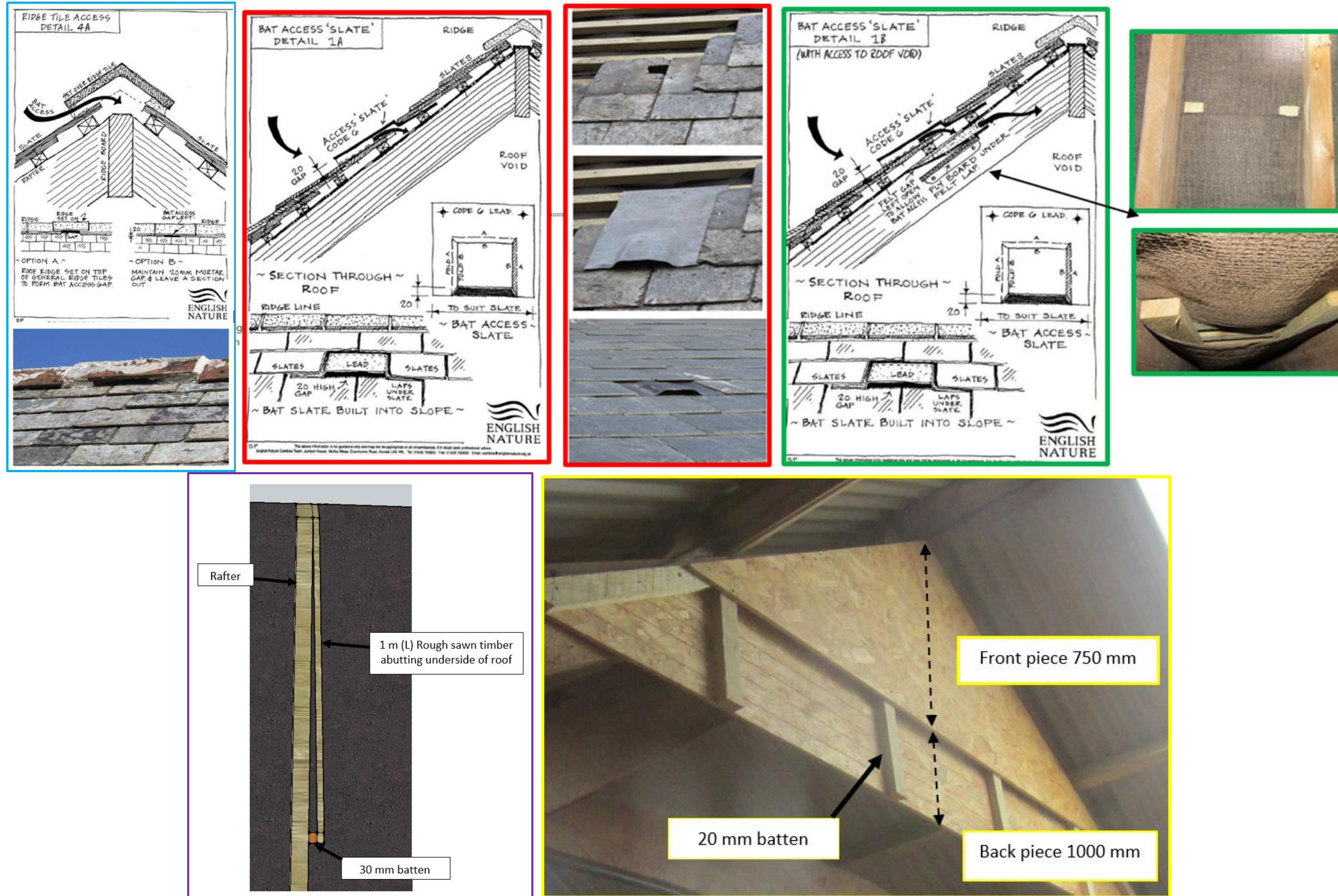
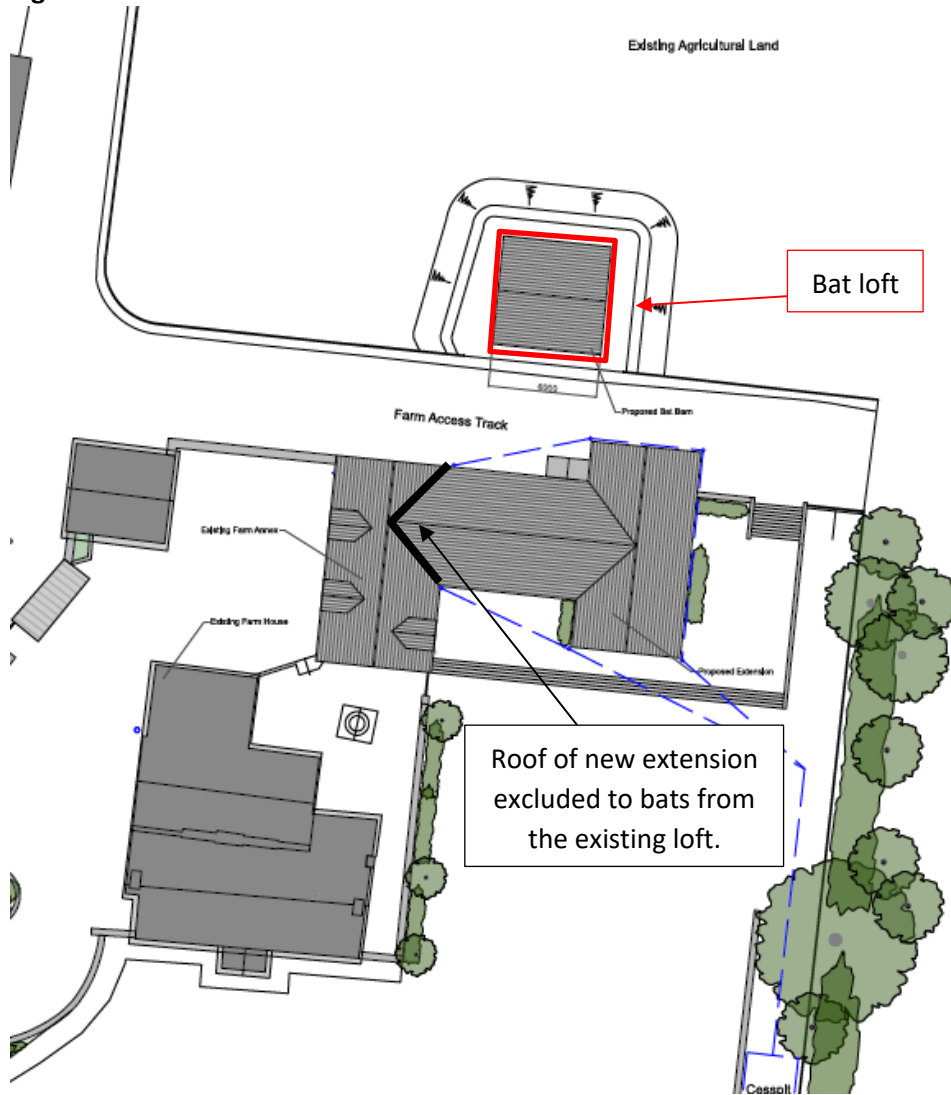




Figure 3 – Location of bat loft



## 9 Annexes

### A Photographs

Plate 1 – North-west elevation of the building



Plate 2 – South-east elevation of the building



**Plate 3 – Gap where the dormer intersects the roof**



**Plate 4 – Pipistrelle bat dropping found on north gable wall**





**Plate 5 – Gaps above the north gable where the bat droppings found**



**Plate 6 - Gap between the roof slates and the bargeboard of the north gable end**





**Plate 6 – Bat droppings inside the loft of the building**



**Plate 7 – Bat droppings inside the loft of the building**



**Plate 7 –Inside the loft of the building and location of water tank**



**Plate 7 –Inside the north part of the loft – picture taken with zoom from the water tank**



## B Legislation

This is a summary of relevant legislation, however it is recommended that proper legal advice be sought as necessary.

### B.1 Bats

All bat species and their roosts are protected in the UK under the Conservation of Habitats and Species Regulations 2017 (as amended), which implement the EC Directive 92/43/EEC, also known as the Habitats Regulations.

They are also protected under the Wildlife and Countryside Act 1981 (as amended), through inclusion in Schedule 5, and under the Countryside and Rights of Way Act 2000.

Taken together, these acts and regulations make it illegal to:

- intentionally or deliberately kill, injure or capture bats;
- deliberately or recklessly disturb bats \*;
- damage, destroy or obstruct access to places of shelter, breeding sites or resting places used by bats;
- have in one's possession or control, any live or dead bat; and
- sell, barter or exchange bats, or parts of bats.

\*Under the Conservation of Habitats and Species Regulations 2017 (as amended) it is illegal to deliberately disturb bats. In particular, any disturbance which is likely (a) to impair their ability to survive, to breed or reproduce, to rear or nurture their young, or to hibernate or migrate, or (b) to affect significantly the local distribution or abundance of the species to which they belong.

\*Under the Wildlife and Countryside Act 1981 (as amended) (Section 9(4)(b)) it is illegal to intentionally or recklessly disturb bats whilst in a place of shelter, although there is a defence under Sections 10(2), 10(3)(c) and 10(5) that allows this otherwise prohibited act. In summary, there is a defence if the disturbance was an incidental result of a lawful operation and could not have reasonably been avoided. The defence applies provided that the appropriate Statutory Nature Conservation Organisation (Natural England) has been notified and allowed a reasonable time to advise on whether the proposed action should be carried out and, if so, the method to be used.

Developments that compromise the protection afforded to bats under the provisions of the Conservation of Habitats and Species Regulations 2017 will almost invariably require a licence to do so lawfully from Natural England. Three tests must be satisfied before Natural England can issue a licence to permit otherwise prohibited acts:

1. Regulation 55(2)(e) states that licences 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 55(9)(a) states that a licence may not be granted unless “there is no satisfactory alternative”.
3. Regulation 55(9)(b) states that a licence cannot be issued unless 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”.

## **B.2 Nesting birds**

All birds, their nests and eggs are protected by the Wildlife and Countryside Act 1981 (as amended) and it is thus an offence, with certain exceptions, intentionally to:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.
- Have in one's possession or control any wild bird (dead or alive) or any part of a wild bird which has been taken in contravention of the Act or the Protection of Birds Act 1954.
- Have in one's possession or control any egg or part of an egg which has been taken in contravention to the Act. This includes items taken or killed before the passing of the Act.
- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered (and in some cases ringed) in accordance with the Secretary of State's regulations.
- Disturb any wild bird listed on Schedule 1, which includes the barn owl, while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.



# C DNA analysis



## Sample Results Form

Date: 27/10/20  
Order Number: EG-RG-0025

Sample No.	Analysis Type	Sample Type	Suspected species	Site location (Postcode/Grid reference)	DNA extraction code	Species Identified	ID method	Ct value/ % match
2	Mixed	Faecal	Pip,Plec	SS 42902.19001 (East Hele Farm)	RG-DNA-0029	Pipistrellus pipistrellus (Common pipistrelle bat) Plecotus auritus (Brown long-eared bat) Myotis mystacinus (Whiskered bat)	qPCR	18 19 17

### What do my results mean?

**DNA extraction code** - this identifies the DNA extraction sample within our laboratory so that it can be revisited if necessary. We keep these extractions for a minimum of 3 months.

**ID method: qPCR** - These results are obtained using species specific qPCR tests. A positive result indicates the presence of DNA from the species reported.

**ID method: DNA sequencing** - where qPCR fails or is not possible, standard DNA sequencing will be performed. Sequences are then matched against a database.

**Ct value** - This is a relative measurement of the amount of species DNA in the sample, derived from the qPCR data. The lower the value the more DNA present in the reaction. This helps to predict the abundance of one species relative to another in the sample. Note: this relative abundance is not directly transferable to the site the samples were collected from.

**% match** - this value is the percentage match of sequences derived from DNA sequencing compared to the database. Due to differences in DNA sequence between individuals within a species this match may not always be exactly 100%.

# D Induction sheet

## EPSL Checklist

Date	
Site	
Licence No.	
Return sent	

Weather	
Cloud	/8 Oktas
Wind	
Temperature °C	Day: Night:

**Licence details:** e.g., *watching brief, exclusion etc...*

### Tool box talk

**Bats potentially present**   
*Work under EPSL as bat or signs of bats found*

**Legislation**   
*Conservation of Hab. and Species. 2017 & WCA 1981 (amended)  
 Intentional or deliberate kill, injure, capture, disturbed and damage to resting place etc.*

**Protection measures**   
*Timing works, temporary screening, watching brief etc.*

**Working practices**   
*Lifting slates vertically, checking under ridge, suitable weather etc.*

**Licensed activities**   
*Removal of roof (under supervision), exclusion, transport of bats, mitigation measures etc.*

**If a bat is found**   
*Stop work, contact ecologist for advice. Give business card.*

**Health and safety**   
*We are only giving ecological advice, the safe system of work and all working practices are the responsibility of the client/contractors.*

Print name	Signature	Date

**Capture and exclusion**

<b>Method</b> <i>E.g. soft demolition</i>	<b>Bats</b> <i>E.g. x2 common pipistrelle</i>	<b>Action</b> <i>E.g. Transport by hand, released into bat boxes</i>

**Injured or dead bats**

<b>Yes/no</b>	<b>Species (if known)</b>	<b>NE advised Y/N</b>

**Other notes**

--