

Bat Survey Report

10 Commons Road, Wokingham, RG41 1JG

Surveys conducted July-August 2024

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	Name	Position	Signature	Date
Prepared by:	Lisha Price	Senior Ecologist		31/07/24
Checked by:	Nick Kirke	Ecologist	NK	19/09/24

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SUMMARY

An internal and external daytime inspection for evidence of bats and bat roosting potential was conducted by ecologist Lisha Price and of Plan Ecology at 10 Commons Road, Wokingham on the 11th of July 2024.

The proposed works seek to add a single storey extension to the rear of the property and convert the existing loft which will include a full reroof and the addition of a flat-roofed dormer window on the rear elevation.

The Site consists of a semi-detached, brick-built building, located down a residential street in Emmbrook, Wokingham. The surrounding area mainly consists of other dwellings and copses of trees.

The building was carefully inspected, and the potential features were examined in the accessible spaces using an endoscope. Bat roosting potential was identified in the form of the gaps around the eaves, the chimney and ridge. The bat roosting potential was assessed according to the scale negligible, low, moderate, or high and the house and was deemed to have high bat roosting potential with a confirmed roost present.

Six bat droppings were found within the loft space which look to be consistent with Brown long eared bat droppings.

Three bat activity surveys were carried out during optimal weather conditions to illustrate the use of the building as a bat roost over a period of time. The surveys were conducted during a time of the year (July-August) when bats are generally fully active.

As per the guidelines from the bat conservation trust three dusks were carried out which is a suitable survey effort for a high potential building if used in conjunction with sufficient infra-red cameras. The night vision aids can vastly improve the detection of bats as they emerge from their roosts and reduce the need for dawn re-entry surveys where deemed appropriate.

A total of one bat access point and one roosting area was identified during the survey:

Roost A is a day roost for one Brown long eared bat in the loft space accessed through a gap around the chimney on the south-eastern corner of the building.

As the planned works on the roof of the building will cause the day roost to be destroyed it will be necessary to apply for a European Protected Species Licence (EPS) with Natural England (NE) and a bat mitigation plan of bitumen lining and a ridge tile gap in a similar location to where the bat emerged will need to be designed to provide a bat roosting area within the ridge on the house.

It is recommended that works only take place in the daytime to avoid any light or noise disturbance to bats or birds which may be nesting or foraging nearby.

Biodiversity Enhancements of a bat brick on the side of the new extension have been advised.

1. INTRODUCTION

1.1 Site Description

The Site consists of a semi-detached, brick-built building, located down a residential street in Emmbrook, Wokingham. The surrounding area mainly consists of other dwellings and copses of trees.

See Appendix 1 for Site Location

1.2 Proposed works

The proposed works seek to add a single storey extension to the rear of the property and convert the existing loft which will include a full reroof and the addition of a flat-roofed dormer window on the rear elevation.

See Appendix 2 for Proposed Plans

1.1 Aims of the survey

A Phase 1 bat survey was carried out with the aim to look for evidence of bats roosting and for the presence of structures within the buildings which hold bat roosting potential. Bat roosting potential was identified, and Phase 2 emergence surveys were therefore carried out.

1.2 General information about bats and buildings

Loft spaces can potentially be utilised by bat species such as e.g. Brown Long-eared bats or Serotine bats which are known to commonly roost inside loft spaces. This can generally be discovered via droppings inside the loft as the droppings will stay protected from weather elements.

External features of the building can potentially be used as roosting sites by e.g. Pipistrelle bat species (*Pipistrellus* spp). Pipistrelle bats are the most common bats out of the British species and they are known to almost exclusively roost inside buildings utilising areas such as cavity walls, soffits and fascia boards, and between tiles and roofing felt. It is not practical to carry out a full physical examination of such building features, which is why activity surveys must be done during summer months (May-September) when the bats are fully active.

Access points of 1-2 centimetres only are used by bats to enter and exit their roosting sites. Most buildings will have gaps of such size in roof areas as ventilation of the roof void would otherwise not be possible.

2. METHODOLOGY

The surveys were undertaken in accordance with the methods described in the Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn), Bat Conservation Trust (BCT). As per the guidelines from the Bat Conservation Trust three dusks were carried out which is a suitable survey effort for a high potential building if used in conjunction with sufficient infra-red cameras. The night vision aids can vastly improve the detection of bats as they emerge from their roosts and reduce the need for dawn re-entry surveys where deemed appropriate.

2.1 External and internal inspection - Phase 1

The building was surveyed during the daytime on the 11th of July 2024 by Lisha Price (Natural England bat licence No. 11503-CLS) and Ashley Johnson (2022-10735), of Plan Ecology. Lisha has over 18 years of experience conducting ecology surveys.

The buildings were inspected for evidence of bats in the form of live or dead bats, droppings, urine staining and insect feeding remains such as moth and butterfly wings. A careful visual search using a Clulite torch was conducted in the loft space. An endoscope (Ridgid) was used for spot checks of internal and external gaps. The exterior of the building was surveyed for droppings on walls and window ledges.

See APPENDIX 3 for Photographs

2.2 Bat roosting potential – Phase 1

The buildings were examined internally and externally to identify structural features that hold bat roosting potential.

The bat roosting potential was assessed according to the scale negligible, low, moderate, high or confirmed:

Negligible: Negligible habitat features on site likely to be used by roosting bats. For example; a simple wooden garden shed, a corrugated iron barn or precast concrete modular garage may fit this category.

Low: A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost Sites do not provide enough space, shelter, protection, appropriate conditions and/ or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).

Moderate: A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat but unlikely to support a roost of high conservation status.

High: A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Confirmed: This category is used where evidence of bats such as live or dead bats or bat droppings are present, or where there are records of a bat roost in the building.

2.3 Emergence survey methodology - Phase 2

Emergence surveys of the buildings were conducted by Nick Kirke (Bat licence 2020-50736) Ashley Johnson (2022-10735), Clarissa Coelho and Myfanwy Price of Plan Ecology Ltd on 16th July, 8th August and 29th August 2024. The survey started 15 minutes before the official sunset and were completed 1½ hour after sunset. Bat passes were recorded with EchoMeter Pro Touch bat detectors. Infrared cameras (Sony AX53) and associated equipment was used to assist the surveys. A series of large infrared lights are used to light up areas for the camera once it is dark enough to use night mode. A thermal camera was also used.

2.5 Weather conditions

This information was taken from the BBC Weather online forecast for Wokingham to illustrate that the survey was conducted during suitable weather conditions. Bats are generally fully active in the months of May - September at temperatures above 10°C if there are favourable weather conditions such as no strong winds (less than 15 mph) and no overnight rain.

Survey date	Sunset/ Sunrise	Weather 22:00/04:00	Temp	Wind speed	Humidity
16 th June 2024	21:12	Partly cloudy	17°C	4 mph	80%
8 th August 2024	20:38	Cloudy	19°C	14 mph	88%
29 th August 2024	19:54	Partly cloudy	16°C	6 mph	55%

2.6 Sound Analysis

The recordings made during the surveys were analysed on kaleidoscope software. All bat call recordings were compared to published reference material such as British Bat Calls Jon Russ (2012) and to a private reference library of previous recordings made from known bat species.

3. RESULTS

3.1 External and internal inspection results – Phase 1

Bat roosting potential:

The building is a brick built Victorian semi-detached house, with slate roof and loft space with no roof liner present. There is some traditional fibre insulation on the floor of the loft. There is lead flashing around the chimney and wooden soffits.

The building was carefully inspected, and the potential features were examined in the accessible spaces using an endoscope. Bat roosting potential was identified in the form of the gaps around the eaves, the chimney and ridge. The bat roosting potential was assessed according to the scale negligible, low, moderate, or high and the house and was deemed to have high bat roosting potential with a confirmed roosts present.

Evidence of bats:

Six bat droppings were found within the loft space which look to be consistent with Brown long eared bat droppings.

3.2 Emergence survey results – Phase 2

16th July 2024:

Noctule (*Nyctalus noctule*), Common pipistrelle (*Pipistrellus pipistrellus*), Nathusius's pipistrelle (*Pipistrellus nathusii*) and Soprano pipistrelle (*Pipistrellus pygmaeus*) bats were seen commuting and foraging around the house.

8th August 2024:

Common pipistrelle and Noctule bats were seen and recorded foraging in the area.

One Brown long eared (*Plecotus auritus*) bat was observed emerging from under a gap around the chimney on the south-eastern chimney.

27th August 2024:

Common pipistrelle bats were seen foraging in the garden during the survey.

See APPENDIX 4 for bat activity information.

3.3 Identified bat roosting areas

A total of one bat access point and one roosting area was identified during the survey:

Roost A is a day roost for one Brown long eared bat in the loft space accessed through a gap around the chimney on the south-eastern corner of the building.

See APPENDIX 5 for access points

4. ASSESSMENT

4.1 Constraints on study information

All accessible areas of the building could be surveyed without restrictions.

The phase 1 survey was carried out during the month of July. As such, seasonal variations could not be observed and potentially only a selection of all species that occur within the survey area will have been noted. The Survey therefore provides a general assessment of potential nature conservation value. However, it is considered that the combination of biological records from the desk study and the site visit provides an accurate representation of the various species and habitat types present or potentially present within the survey area.

Bat survey results are generally considered to be valid within two years of the survey date or until the next active bat season of May-September. The County Council Ecologists and/or Natural England may ask for updated surveys if the reports are older than two years.

4.2 Potential impacts on bat foraging and commuting habitat.

There will be no negative impact on bat commuting and foraging areas as the building will not increase significantly in footprint enough to have an effect.

4.3 Legislation and policy guidance

As population numbers have fallen, all bats and their roosts are protected under The Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017.

Under this legislation it is an offence to:

- deliberately capture (or take), injure or kill a bat;
- intentionally, recklessly or deliberately disturb a bat (in relation to the Wildlife and Countryside Act 1981 (as amended) the offence applies whilst the species is occupying a structure or place which it uses for shelter or protection; in relation to the Conservation of Habitats and Species Regulations 2017 it applies anywhere);
- damage or destroy the breeding or resting place (roost) of a bat;
- possess a bat (alive or dead), or any part of a bat;
- intentionally or recklessly obstruct access to a bat roost;
- sell (or offer for sale) or exchange bats (alive or dead), or parts of bats.

Please refer to the original legislation for the definitive interpretation.

5. RECOMMENDATIONS

5.1 Discussion of results

A total of one bat access point and one roosting area was identified during the survey:

Roost A is a day roost for one Brown long eared bat in the loft space accessed through a gap around the chimney on the south-eastern corner of the building.

As the planned works on the roof of the building will cause the day roost to be destroyed it will be necessary to apply for a European Protected Species Licence (EPS) with Natural England (NE) and a bat mitigation plan of bitumen lining and a ridge tile gap in a similar location to where the bat emerged will need to be designed to provide a roosting area for the brown long eared bat within the ridge.

See Appendix 6 for mitigation recommendations.

It is recommended that works only take place in the daytime to avoid any light or noise disturbance to bats or birds which may be nesting or foraging nearby.

Biodiversity Enhancements of a bat brick on the side of the new extension have been recommended in Appendix 7.

5.2 Survey Effort

The house was deemed to have high bat roosting potential with a confirmed roost present and three activity surveys were carried out. Each survey took place in accordance with the Bat Conservation Trust Bat Survey Guidelines. These guidelines are used by Local Planning Authority ecology team during the planning application process to determine the level of survey effort that is needed.

As per the guidelines from the bat conservation trust three dusks were carried out which is a suitable survey effort for a high potential building if used in conjunction with sufficient infra-red cameras. The night vision aids can vastly improve the detection of bats as they emerge from their roosts and reduce the need for dawn re-entry surveys where deemed appropriate.

Ecological Enhancement Opportunities

The National Planning Policy Framework (NPPF), issued in March 2012, states that the planning system should contribute to "minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures". It also states that "opportunities to incorporate biodiversity in and around developments should be encouraged".

The master planning process should maximise opportunities for enhancement, in order to achieve a net increase in biodiversity. This is in accordance with the NERC Act (2006) which requires that “every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.” Recommendations for ecological enhancement are provided below....

- Minimising light and noise pollution on the site. In particular minimising the hours the construction site is lit.
- Integrated bat brick in new extension to provide further bat roosting opportunities on the Site.

Details of possible biodiversity enhancement have been illustrated in Appendix 7.

6. Bat Mitigation Plan

Timing schedule for works: Works may only commence following four nights/days when temperatures are consecutively above 8°C between mid-November and mid-March to safeguard any hibernating bats which may be present (as the features suitable for supporting hibernating bats are external presence/absence of this roost type cannot be undertaken without destruction of the roost). No other timing restrictions will apply and works can be undertaken at any time between mid-March and mid-November in line with the approved licence and under supervision of a bat worker.

See Appendix 8 for time schedule of works.

Temporary Bat Roost: One 1FF Schwegler Bat Box or similar will be put up on a suitable tree on site as a safe place to move any bats to. The licenced ecologist will identify suitable trees and bat boxes prior to installation. This box will need to stay in place until completion of all works and installation of all the mitigation features to be included.

Internal Building Inspection prior to works: The loft will be inspected by a licenced bat worker on the morning before work of removing any roof tiles or roofing material starts.

On site supervision during works: A licensed bat worker will hold a “tool box talk” to the building contractors prior to works commencing and will be *onsite during the removal of the roof tiles, and roofing material in case bats or evidence of bats are found and will be on standby during further works. Evidence found may be used to tweak and improve the mitigation plan where possible. Roof tiles and roofing material will be carefully removed by hand.*

Precautions if bats are found during works: If bats are found during building works, they will be safeguarded by the licensed bat worker supervising the works. If bats are found during building works, they may be moved by a licensed bat worker to an escape proof ventilated container with a cloth to hang from and hide behind, and suitable food and water will be provided. The bat will be kept inside the container during daytime for safekeeping from the building works, cold temperatures, and daytime predators. The bat will then be released on the same site one hour after sunset and will be able to move to a safe nearby roosting area of its own choice; alternatively depending on conditions they may be placed in the bat boxes attached to the trees as temporary mitigation the entranced sealed until after sunset in order keep them safe until release.

Using bat friendly roofing material: The roof of the house must be lined with non-breathable black bitumen roofing felt. Breathable roof membranes like e.g. Tyvek should not be used as it is known to rip when bats climb across it and the holes caused will reduce the efficiency of the breathable membrane. It has been well documented that bats often get entangled in the ripped Tyvek felt and die as they become trapped.

Ridge tile gaps: Two pairs of ridge tile gaps should be provided on the new roof of the house providing bat roosting opportunities for the brown long eared bat.

See Appendix 7 for the design and details of the ridge tile gaps.

Integrated bat brick: An integrated bat brick such as a Forticrete brick has been proposed to provide additional biodiversity enhancements on the new extension.

Inspection of new bat access points: The new bat ridge tile gaps will be inspected by a licenced bat worker on completion before the scaffolding has been removed.

Limited external lighting on site: Extra care will be taken to ensure that external lights are kept to a minimum and will not illuminate the bat access points or flight paths to nearby trees. The light will be aimed to illuminate only the immediate area required by using as sharp a downward angle as possible.

A shield or hood will be used to control or restrict the area to be lit and limit “light spillage” on the site.

Post project monitoring surveys: No monitoring surveys are required for a brown long eared bat day roost as per the Natural England requirements.

7. REFERENCES

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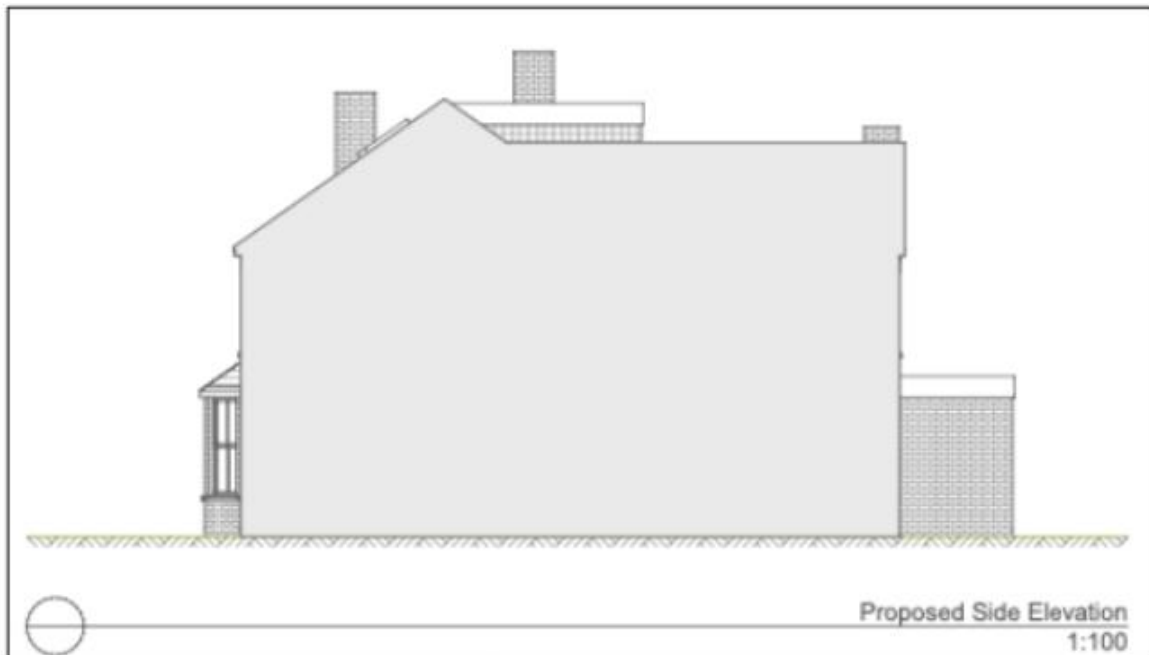
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APPENDIX 1: Site Location



APPENDIX 2: Proposed elevations





APPENDIX 3: Photographs



Photograph 1: Side elevation.



Photograph 2: Side elevation.



Photograph 3: Wooden soffits.



Photograph 4: Gaps around wooden soffits.



Photograph 5: Rear elevation.



Photograph 6: Rear elevation.



Photograph 7: Rear elevation.



Photograph 8: Loft space, gaps in tiles.



Photograph 9: Loft space.



Photograph 10: Six bat droppings found within the loft space.



Photograph 11: Bat droppings found within the loft space.



Photograph 12: Loft space, light coming through at ridge.



Photograph 13: Loft space no liner straight to slate tiles.



Photograph 14: Loft space.

APPENDIX 4: Activity Survey & Sound Analysis Results

Emergence 1 Survey 16th July 2024

Surveyors Ashley Johnson and Myfanwy Price

Time	Species	Activity	Flight Direction
20:57	Survey start		
21:12	Official sunset		
21:12	Noctule	Commuting over house	W-E
21:21	Soprano pipistrelle	Foraging around the back garden	
21:30	Nathusius' pipistrelle	Foraging around the back garden	
21:33	Common pipistrelle	Foraging around the back garden	
22:42	Survey Finish		

Emergence 2 Survey 8th August 2024

Surveyors Nick Kirke and Clarissa Coelho

Time	Species	Activity	Flight Direction
20:23	Survey start		
20:38	Official sunset		
20:40-21:04	Common pipistrelle	Foraging around the area	
21:14	Brown long eared	Emerging from gap around the SE corner chimney	
21:46	Noctule	Foraging	
22:08	Survey Finish		

Emergence 3 Survey 27th August 2024

Surveyors Nick Kirke and Belle Adcock

Time	Species	Activity	Flight Direction
19:39	Survey start		
19:54	Official sunset		
20:29	2 Common pipistrelles	Foraging around garden	
21:24	Survey Finish		

Surveyor and camera positions



Surveyors and 
camera positions

Coverage of night cameras



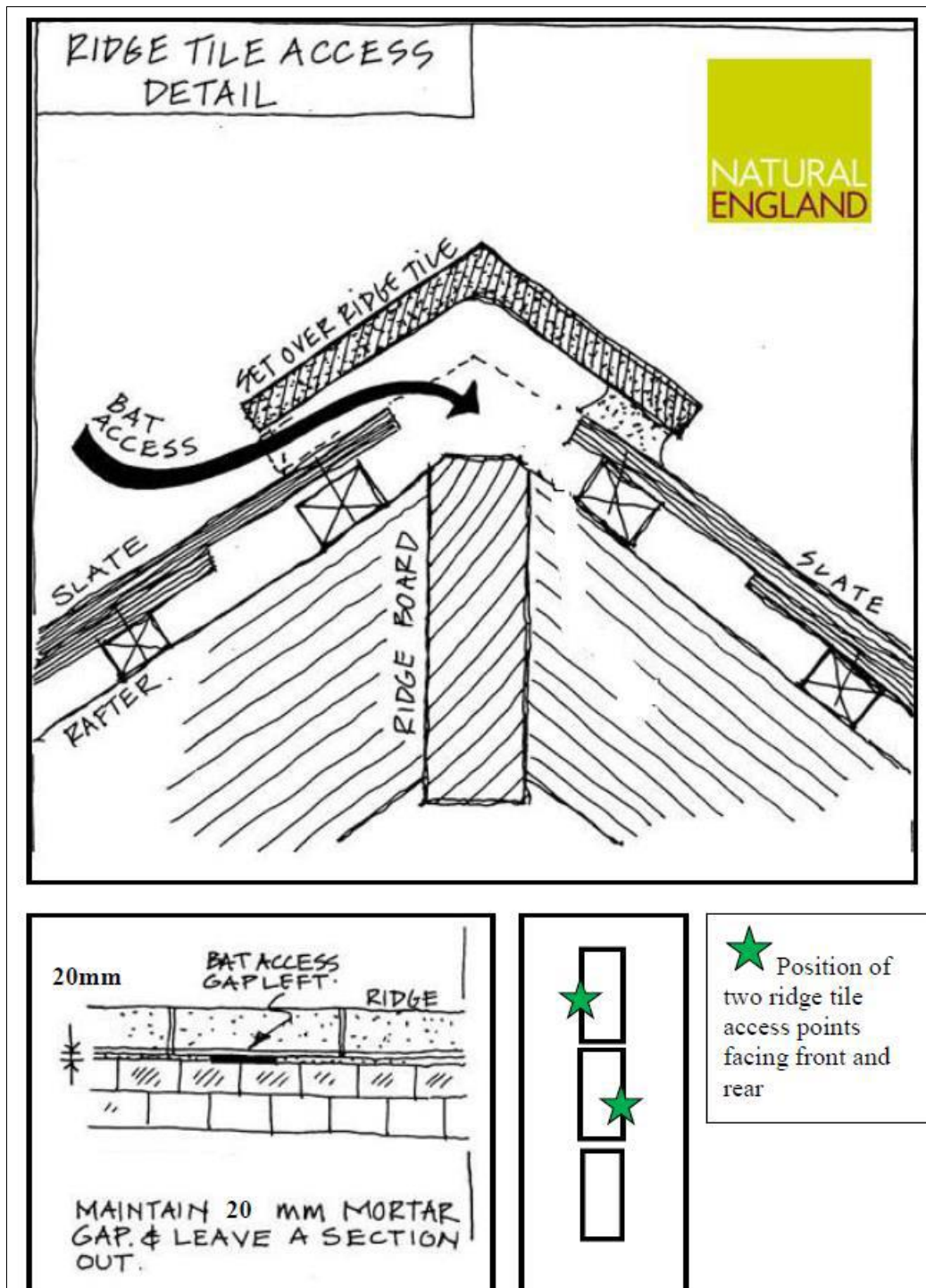


APPENDIX 5: Bat roosts and Access points



Roost A is a day roost for one Brown long eared bat in the loft space accessed through a gap around the chimney on the south-eastern corner of the building.

APPENDIX 6: Mitigation





Ridge tile in a similar location to where the bat emerged leading into the loft and bitumen liner to be added onto the new roof.

APPENDIX 7: Biodiversity Enhancements



APPENDIX 8: Schedule of Works

Works to be carried out	Before any works begin	During works	After works
One bat boxes on tree to be installed to provide temporary roosting for bat.			
Internal inspection using endoscope prior to start of works – by licensed bat worker			
Toolbox talk to building team - by licensed bat worker			
Supervised removal of tiles and roof materials- by licensed bat worker			
Inspection of mitigation.			