

Bat Survey Report

Lindisfarne, Wargrave Road, Wargrave, RG10 8PE

Surveys conducted May-June 2025

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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 of Plan Ecology at Lindisfarne, Wargrave on the 25th of February 2025.

The proposed works consist of the construction of a new detached dwelling following the full demolition of the house and garage.

The Site consists of a detached brick-built house with an adjacent garage and a timber boathouse south of the property. The property is located in a rural setting and is surrounded by mature trees. The Hennerton Backwater runs immediately adjacent to it, and the River Thames just 170m further west. The wider landscape includes deciduous woodland and arable pastoral fields.

The buildings were carefully inspected, and the potential features were examined in the accessible spaces using an endoscope and torch with a ladder for accessing higher areas. Bat roosting potential on the house and garage was found in the form of the loft space, lifted roof tiles and hanging wall tiles. The buildings are also situated by the riverside making the site good foraging and commuting habitat for bats. The bat roosting potential was assessed according to the scale negligible, low, moderate, or high and the building was deemed to have high bat roosting potential with a confirmed roost present.

The loft space contained a few scattered bat droppings which look to be consist in shape and size to pipistrelle bat droppings

The boat house has large openings and timber beams on the interior which could be used as a feeding perch for bats. The boat house was deemed to have low potential for bats no works are planned for the boat house at this time and further surveys were not carried out.

Three bat activity surveys were carried out on the house and garage 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 (May-June) when bats are generally fully active.

As per the guidelines from the bat conservation trust three emergence surveys at dusk were carried out which is a suitable survey effort for a high potential building, if used in conjunction with sufficient infra-red or thermal 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.

One bat access point and one roosting area was identified during the surveys.

Roost A is a day roost for two soprano pipistrelle bats in the space between the roof tiles and the soffit on the south-eastern corner of the house.

As the planned demolition will cause the soprano pipistrelle 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 a bat brick in a similar location as the roost will need to be designed to provide bat roosting areas and access points 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.

1. INTRODUCTION

1.1 Site Description

The Site consists of a detached brick-built house with an adjacent garage and a timber boathouse south of the property. The property is located in a rural setting and is surrounded by mature trees. The Hennerton Backwater runs immediately adjacent to it, and the River Thames just 170m further west. The wider landscape includes deciduous woodland and arable pastoral fields.

See APPENDIX 1 for Site Location

1.2 Proposed works

The proposed works consist of a construction of a new detached dwelling following the full demolition of the house, garage and boat house.

See APPENDIX 4 Site plan

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.

Whiskered bats are regularly found in buildings and can be found in modern house but more particularly in older buildings. The Whiskered bat is a crevice dweller, often roosting under hanging wall tiles, above soffits, in cavity walls and under ridge tiles.

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 25th of February 2025 by Lisha Price (Natural England bat licence No. 11503-CLS) of Plan Ecology. Lisha has over 20 years of experience conducting ecology surveys for bats.

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 2 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 Lisha Price, Nick Kirke (Bat licence 2020-50736) Myfanwy Price (Bat Licence 2019-40496), Hayley Johnstone, Lisha Price, Isaac Wrenn and Belle Adcock of Plan Ecology Ltd on 16th May, 6th June and 27th June 2025. 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.

2.5 Weather conditions

This information was taken from the BBC Weather online forecast for Wargrave 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 May 2025	21:16	Mostly cloudy	13°C	5 mph	68%
6 th June 2025	20:50	Slightly cloudy	12°C	8 mph	63%
27 th June 2025	21:25	Slightly cloudy	20°C	10 mph	76%

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 buildings were carefully inspected, and the potential features were examined in the accessible spaces using an endoscope and torch with a ladder for accessing higher areas. Bat roosting potential on the house and garage was found in the form of the lifted roof tiles and hanging wall tiles. The buildings are also situated by the riverside making the site a good foraging and commuting habitat. The bat roosting potential was assessed according to the scale negligible, low, moderate, or high and the building was deemed to have high bat roosting potential with a confirmed roost present.

The building was assessed as having negligible hibernation potential.

There is potential bat foraging habitat in the garden and surrounding area, however the plans themselves are small and localised.

See APPENDIX 3 for Map of Potential Roost Features

Evidence of bats:

No bats or evidence of bats was found during the internal inspection.

See APPENDIX 2 for Photographs

3.2 Emergence survey results – Phase 2

15th May 2025:

Common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), noctule (*Nyctalus noctula*), daubenton's myotis (*Myotis daubentonii*), brown long eared (*Plecotus auritus*), and western barbastelle (*Barbastella barbastellus*) bats were seen and recorded foraging and commuting around the house and garden.

Two soprano pipistrelle bats were seen emerging from the space between the roof tiles and the soffit on the south-eastern corner of the house.

6th June 2025:

Common pipistrelle, soprano pipistrelle, brown long eared and noctule bats were observed and recorded foraging around the house, garden and nearby trees.

One soprano pipistrelle bat was seen emerging from the space between the roof tiles and the soffit on the south-eastern corner of the house.

27th June 2025:

Common pipistrelle, soprano pipistrelle, noctule and natterer's myotis (*Myotis nattereri*) bats were seen and recorded foraging around the garden and nearby trees.

One soprano pipistrelle bat was seen emerging from the space between the roof tiles and the soffit on the south-eastern corner of the house.

See APPENDIX 5 for bat activity information.

3.3 Identified bat roosting areas

One bat access point and one roosting area was identified during the surveys.

Roost A is a day roost for two soprano pipistrelle bats in the space between the roof tiles and the soffit on the south-eastern corner of the house.

See APPENDIX 6 for bat 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 February. 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

One bat access point and one roosting area was identified during the surveys.

Roost A is a day roost for two soprano pipistrelle bats in the space between the roof tiles and the soffit on the south-eastern corner of the house.

As the planned demolition will cause the soprano pipistrelle 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 a bat brick in a similar location as the roost will need to be designed to provide bat roosting areas and access points 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 and bird nesting brick have been advised.

See APPENDIX 8 for biodiversity enhancements

5.2 Survey Effort

The house was deemed to have high bat roosting potential and three activity surveys were carried out. The boat house was deemed to have low potential and one survey was completed. 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.
- Insect bricks built in can provide additional habitat for bees and other insect, these should be placed on a southern elevation near to pollinator friendly plants.
- Adding bat bricks and nesting bricks into the new building can provide roosting opportunities for bats and nesting opportunities for breeding birds.

Details of possible biodiversity enhancement have been illustrated in APPENDIX 8.

6. Bat Mitigation Plan

Timing schedule for works: Removal of roof tiles where the roost was identified and any materials near the roosts will be restricted to be carried out when night temperatures have been above 8C during suitable weather conditions.

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 the bats to. The licenced ecologist will identify a suitable tree and bat box within the licence.

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 hand removal of tiles and other materials around the identified roost areas 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.

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 entrances sealed until after sunset in order keep them safe until release.

New bat access points: One bat brick will be used on the south aspect of the house. This will be placed near to the soffits and away from any light sources.

See APPENDIX 7 for design of bat mitigation.

Inspection of new bat brick: The new bat brick 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. Brown long-eared bats are bat species that are known to be “light sensitive” and may be disturbed by an increase in light levels by the bat access points which could cause them to abandon their roosts.

6. REFERENCES

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APPENDIX 1: Site Location



APPENDIX 2: Photographs



Photograph 1: Adjacent Garage.



Photograph 2: Gaps under roof tiles.



Photograph 3: Adjacent garage.



Photograph 4: Gaps under roof tiles.



Photograph 5: Front elevation.



Photograph 6: Concrete driveway.



Photograph 7: Hanging wall tiles on the side elevation.



Photograph 8: Hanging wall tiles.



Photograph 9: Hanging wall tiles.



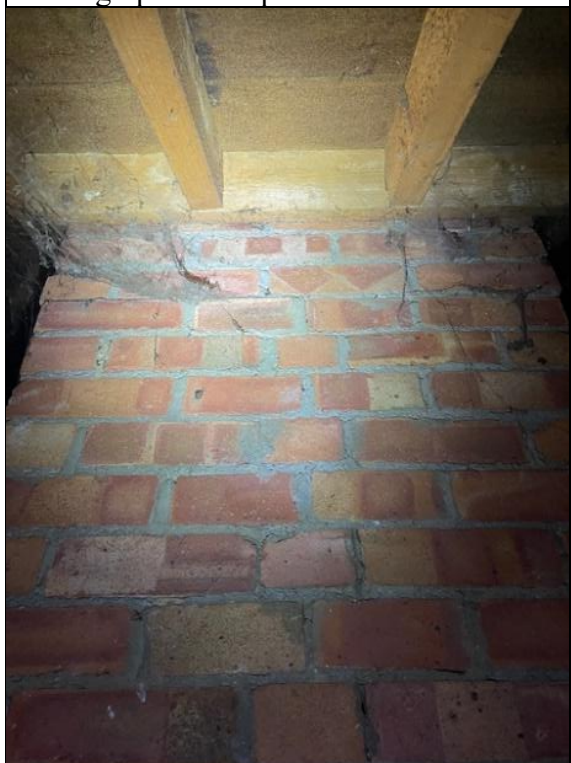
Photograph 10: Wooden cladding above bay window.



Photograph 11: Gaps around roof tiles.



Photograph 12: Loft space.



Photograph 13: Loft space.



Photograph 14: Loft space.



Photograph 15: Loft space.



Photograph 16: Loft space.



Photograph 17: Loft space.



Photograph 18: Loft space.



Photograph 19: Garage interior used for storage.



Photograph 20: Garage interior used for storage.



Photograph 21: Liner in the garage loft space.



Photograph 22: Timber clad boathouse.



Photograph 23: Timber boathouse.



Photograph 24: Boat house interior.



Photograph 25: Timber boathouse interior.



Photograph 26: Boathouse side elevation.



Photograph 27: Mature trees in the rear garden.



Photograph 28: Rear elevation and garden.



Photograph 29: Mature trees in the rear garden.



Photograph 30: Mature tree in the rear garden.



Photograph 31: Side elevation.



Photograph 32: Side elevation.



Photograph 33: Rear garden with mature trees.

APPENDIX 3: Map of Potential Roost Features



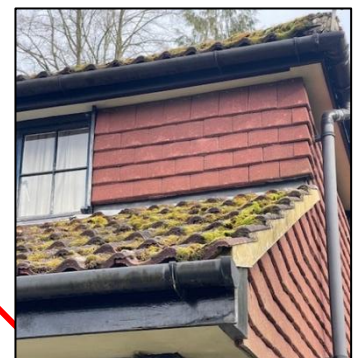
Hanging wall tiles.



Gaps under roof tiles on garage.



Raised roof tiles.



Hanging wall tiles on the side and rear elevation.

APPENDIX 4: Site plan



APPENDIX 5: Activity Survey & Sound Analysis Results**Emergence 1 Survey 16th May 2025**

Surveyors Lisha Price, Hayley Johnstone, Euan Johnson and Belle Adcock

Time	Species	Activity	Flight Direction
20:35	Survey start		
20:50	Official sunset		
20:55	Soprano pipistrelle	Emerging from the space between the roof tile and the soffit on the south-eastern corner	
21:01	Soprano pipistrelle	Commuting	SE-NW
21:04	Soprano pipistrelle	Emerging from the space between the roof tile and the soffit on the south-eastern corner	
21:24	Noctule	Commuting	NW-SE
21:38	Daubenton's bat	Foraging	
21:39	Brown long eared	Foraging	
21:47	Common pipistrelle	Foraging nearby	
21:58	Western barbastelle	Foraging	
22:20	Survey Finish		

Emergence 2 Survey 6th June 2025

Surveyors Nick Kirke, Myfanwy Price, Euan Johnson and Isaac Wrenn

Time	Species	Activity	Flight Direction
21:01	Survey start		
21:16	Official sunset		
21:11-22:12	Common pipistrelle	Foraging in around trees	N
21:19	Soprano pipistrelle	Emerging from the space between the roof tile and the soffit on the south-eastern corner	
21:38	Soprano pipistrelle	Foraging in garden	
21:47	Brown long eared	Foraging over house on the SE side	

22:19- 22:33	Noctule	Foraging	N
22:46	Survey Finish		

Emergence 3 Survey 27th June 2025

Surveyors Myfanwy Price, Nick Kirke, Isaac Wrenn and Euan Johnson

Time	Species	Activity	Flight Direction
21:07	Survey start		
21:25	Official sunset		
21:18- 21:51	Common pipistrelle	Foraging in trees	N
21:31	Natterer's myotis	Foraging	
21:40	Soprano pipistrelle	Emerging from the space between the roof tile and the soffit on the south-eastern corner	
21:46	Soprano pipistrelle	Foraging around garden	S
21:56	Noctule	Foraging	N
22:16	Common pipistrelle	Foraging in garden	
22:55	Survey Finish		

Surveyor and camera positions



Surveyors and
camera positions



Examples of night shot



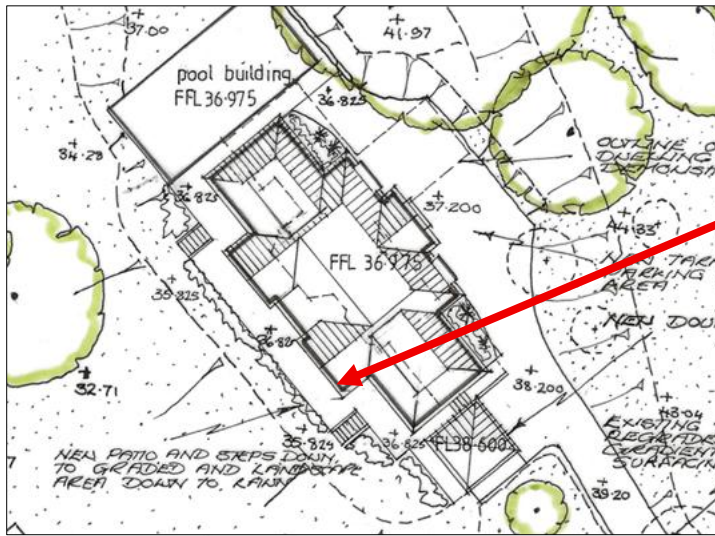


APPENDIX 6: Bat access points



Roost A is a day roost for two soprano pipistrelles in the space between the roof tiles and the soffit on the south-eastern corner.

APPENDIX 7: Mitigation



Forticrete Bat brick



Bat brick placed near soffits on new building.



REAR ELEVATION

APPENDIX 8: Biodiversity Enhancements

