

Ecological Impact Assessment for Bats and Breeding Birds

Abbotsford, Thorverton, Devon



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Code of Professional Conduct

The information contained within this report is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

BS 42020:2013

This survey has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of practice for planning and development.

Validity of survey data and report

The findings of this report are valid for 12 months from the date of survey.

If a European Protected Species Licence application (if required) has not been made within this period, updated surveys will be required to support a licence application.

Report author	Kari Bettoney BSc (Hons) ACIEEM
Checked by	Ceridwyn Adkins BSc (Hons) MCIEEM
Client	Nick Paget
Site address	Abbotsford, The Bury, Thorverton, Exeter EX5 5NT
OS grid reference	SS925021
Survey dates	Preliminary Visual Assessment: 14th June 2023 Emergence surveys: 29th June 2023 and 8th August 2023
Surveyors	Kari Bettoney Bat Licence: Class 1 and 2 Dormouse Licence: Class 1 Registered Consultant: Bat Mitigation Class Licence (BMCL)
Report date	25 th August 2023
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Checklist - Devon Householder / Building Applications with only bat roost / bird nesting issues

To speed up assessment by the LPA, this form should be completed by the Ecological Consultant and submitted at the beginning of the Ecology Report.

Ecological consultant: Kari Bettoney

1. Impact assessment / survey effort

<p>Has the impact assessment / survey been done within the last 12 months and does it meet national guidance requirements? If there have been any deviations from national guidance, please select No in the right-hand column.</p>	<p>Yes ✓</p>	<p>No</p>
	<p>Dates: Preliminary survey: Preliminary Visual Assessment 14th June 2023 Emergence surveys 29th June 2023 and 8th August 2023</p>	

2. Ecological impacts

<p>2a. Proposal impacts on bats / birds and mitigation measures are specified.</p>		<p>Yes (conditions needed) ✓ No (no conditions needed)</p>
<p>2b. Proposal has other ecological impacts which the LPA needs to consider.</p>	<p>No ✓</p>	<p>Yes</p>
<p>2c. Is the proposal likely to result in an offence under the Conservation of Habitats and Species Regulations?</p>		<p>Yes (go to 2.d) ✓ No (go to 2.e)</p>
<p>2d. If YES (an offence IS likely) Could the works be undertaken, under a Low Impact Class Licence i.e.: • Three or fewer roosts are impacted by the proposals, and • The proposal will have a low or temporary impact, and The proposal only effects: • Low conservation status roosts for low numbers of: common pipistrelle, soprano pipistrelle, brown long-eared, whiskered, Brandt's, Daubenton's Natterer's and/or - Feeding, day, night and/or</p>	<p>Yes ✓</p>	<p>No</p>

transitional roosts for low numbers of serotine and/or Day and/or transitional roosts for low numbers of lesser horseshoe.

2e. If NO (an offence is NOT likely)

Does the roost meet any of the following criteria:

- maternity or hibernation roost
- greater horseshoe bat roost
- grey long-eared bat roost
- more than three species of bat found in small numbers

No (none are met)

Yes (one or more are met)

2f. Does the proposal potentially impact on barn owls?

No ✓

Yes

3. Expertise

Are you, the ecological consultant, registered under either the Level 1 or the Level 2 Bat Survey Class Licence?

Yes ✓

No

Are you a member of CIEEM or a Registered Consultant under Annex B of the Low Impact Class Licence for bats (or under Annex C or D for a serotine or lesser horseshoe roost where relevant)?

Yes ✓

No

Executive Summary

A preliminary visual assessment survey and emergence surveys were undertaken between 14th June 2023 and 8th August 2023 at Abbotsford, The Bury, Thorverton, Exeter EX5 5NT to assess the building for suitability to contain protected species such as bats or breeding birds. The results of the preliminary visual assessment and emergence surveys indicate that the building is used by at least one roosting whiskered bat (*Myotis mystacinus*).

Therefore, a derogation licence from Natural England will be required to allow works to proceed lawfully. The licence can be obtained once planning permission or listed building consent has been obtained and can be dealt with via a fast-track Low Impact Bat Licence.

Works to other parts of the building can proceed with negligible risk to bats following the precautionary working method given in Section 5.1 and Appendix 2. A copy of the method statement must be retained on site during the period of works, and must be communicated to all workers.

In the unlikely event that bats are found at any point during works, the ecologist must be called immediately on 07762 051481.

Mitigation for bats

A woodcrete bat box must be installed on the eastern aspect of the house under the eaves as close to the existing roost as practicable or a new roost must be created within the lintel or eaves. See Section 5.1 and Appendix 1 for specification.

Breeding birds

The building has low potential to be used by crevice nesting species, with a low number of suitable gaps above the northerly window on the eastern aspect.

No evidence of use of any part of the building was observed during any of the surveys.


A swift box must be erected under the eaves of the eastern wall of the new building and not above any opening window. See Section 5.2 and Appendix 1 for specification

Otter

Lighting and any new glazing to the east of the building must be constructed in line with requirements for bats to prevent disturbance to any otters *Lutra lutra* that may occasionally use the garden or stream.

Lighting and glazing

The garden is used by foraging bats, which, along with many other species of wildlife, can be negatively impacted by lighting or light spill from new glazing. To prevent a negative impact from any additional light levels created as a result of this development, any new glazing must be fitted with Smart Glass or Window Protection Film, and any new or additional exterior



lighting must use low-lux, warm white LEDs, which are low-level, hooded, to ensure light is directed downwards, and must be on a motion sensor and timer so it goes off when not in use. New interior lighting must be recessed to prevent light spill from existing or new windows or doors. See Section 5.5 for full specification and details.

Legal responsibilities	
Bat licence	<p>Once planning/listed building consent is obtained a derogation licence from Natural England will be required to allow the works to proceed lawfully.</p> <p>Planning consent/listed building consent does not override protected species legislation.</p> <p>The licence can be dealt with via a Low Impact Licence obtained from Natural England with the assistance of the licensed ecologist.</p>
Precautionary working method for remainder of the building	<p>The precautionary working method given in Section 5.1 and Appendix 2 must be followed by all workers.</p> <p>A copy of the precautionary method statement must be kept on site and the contents must be communicated to all workers. A printable copy is provided in Appendix 2.</p>
Protection of unexpected bats	<p>Care must be taken to check under any roof tiles, flashing, soffits, fascias and verge covering material to check for any unexpected bats. If in the unlikely event that a bat is found, work must pause and the ecologist must be contacted immediately by calling 07762 051481.</p> <p>The bat should be covered back up if <u>it is safe to do so</u> without crushing or injuring the bat. If this is not possible, the bat should be carefully handled <u>wearing gloves</u> and placed in a secure cardboard box with a lid and small pencil-sized air holes, which is then stored in a cool place, and the ecologist must be contacted immediately by calling 07762 051481.</p> <p>See Appendix 2 for full Precautionary Method Statement</p>
Nesting bird check	<p>Immediately prior to the start of works and not more than 48 hours before start of works, a check should be made for nesting birds. If nesting birds are found then works must be postponed until the checks have fledged which may be for a period of several weeks.</p>
Lighting	<p>Any new glazing, or interior or exterior lighting must be in line with the mitigation given in Section 5.5.</p>



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1. Introduction

A preliminary visual assessment survey of a building at Abbotsford, The Bury, Thorverton, Exeter EX5 5NT at grid reference SS925021, was undertaken on 14th June 2022 to assess the site for the presence of protected species, and to make recommendations for further survey work as appropriate.

During the preliminary survey various crevices suitable for use by roosting bat and a large gap into the loft were observed. Due to these findings, the age of the property, and the setting next to the unlit stream wildlife corridor, further bat emergence surveys were recommended. Two bat emergence surveys were carried out on 29th June and 8th July 2023.

1.1 Proposed works

It is understood that it is proposed to renovate the property including replacing windows.

1.2 Survey aims

The purpose of this assessment is to ascertain which protected species are present within the site, and to inform avoidance, mitigation, compensation and enhancement measures to protect these species during and after works. The assessment will also identify if a European Protected Species Licence from Natural England will be required to allow the development to proceed lawfully if planning permission is granted.

The results of these surveys will be used to categorise the roost and assess the impact of this development on any protected species present. The assessment data will be used to inform working methods, including avoidance, mitigation, compensation and enhancement measures required to safeguard protected species throughout the development and to inform the local Planning Authority when reviewing the planning application.

This report documents the results of the preliminary visual assessment at the site and the emergence surveys.

This survey has been prepared in accordance with the Bat Conservation Trust's "Bat Surveys Good Practice Guidelines" (Collins, 2016).

1.3 Building description

The building comprises a former church house built during the 17th century, with 20th century renovations. Constructed of local stone and rubble, the front elevation is mostly colour washed and rendered, with an unlined thatched roof with plain ridge, which is gabled at ends. Chimneys present include a left end stack with brick shaft, and a rear lateral stack with brick shaft.

A lean-to extension is located on the south-eastern gable.

1.4 Site description

The building is situated within the village of Thorverton in Devon, close to the church and is surrounded by other historic buildings.

The building is immediately surrounded by hard standing and gardens to front, with a small grassed area and unlit stream to the rear which leads to open countryside and the wider landscape to the north. A number of small ornamental trees and larger native trees are also present in the rear garden.

The site is well-connected to the wider landscape via the unlit stream corridor which leads to areas of woodland and the River Exe to the east and a landscape with Devon hedges and woodland to the west.

The nearby landscape is farmed, a mix of arable and grazing land, creating a diverse landscape with food sources for foraging and commuting bats.

Overall, the site and surroundings provide a high-quality landscape for commuting and foraging bats.

The immediate surrounding of the site is largely unlit by municipal lighting to the rear with the nearest streetlights as the front of the building and within the centre of Thorverton itself.

No domestic lighting is currently present to the rear of the property.

1.5 Surveyor

The survey was completed by Kari Bettoney, an Associate Member of the Chartered Institute of Ecology and Environmental Management (ACIEEM), an ecologist with nine years' of professional experience and qualified as having the required Competency for Species Survey as outlined by the Chartered Institute of Ecology and Environmental Management.

<https://cieem.net/resource/competency-framework/>

Kari Bettoney holds a Level 2 Class Licence in relation to bats which permits the surveying of bats using artificial light, endoscopes, hand, and static hand nets.

Kari holds a Level 1 dormouse licence which permits surveying and handling of hazel dormouse.

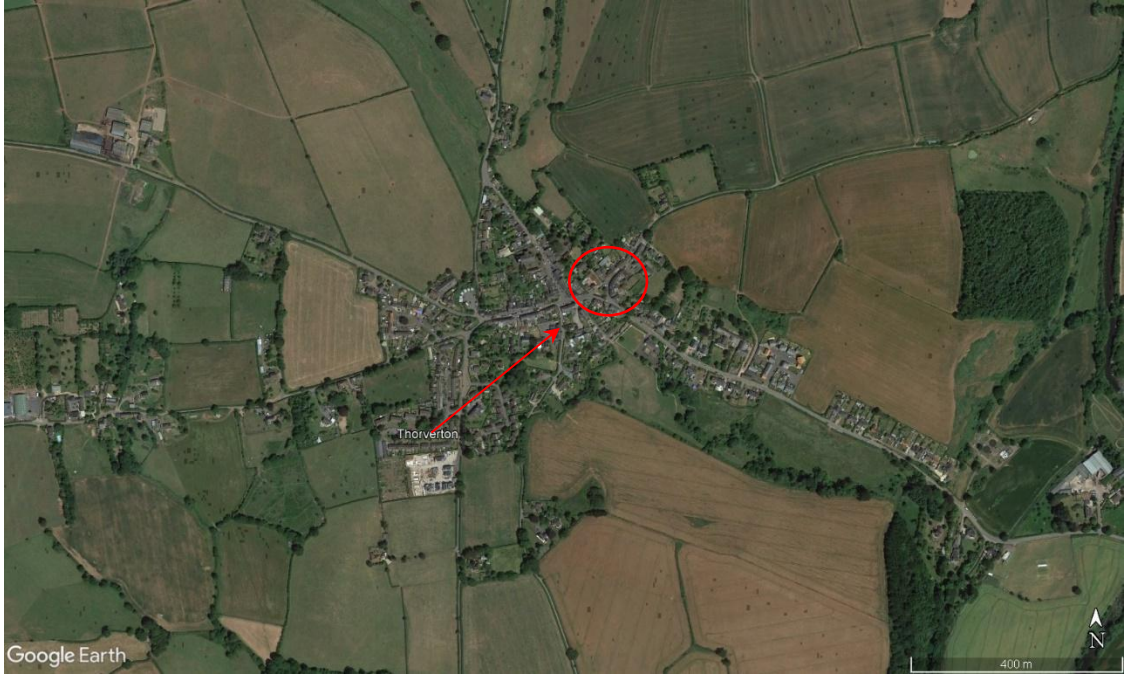


Figure 1 Landscape view of the building surveyed ©Google Earth/CNES 2022

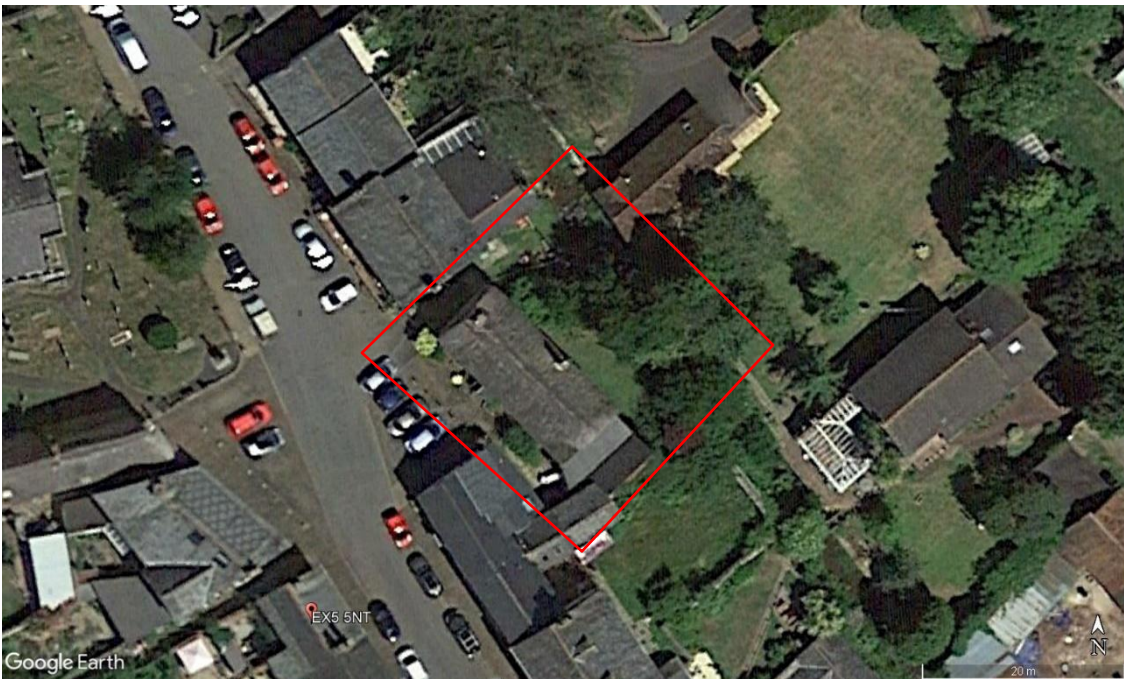


Figure 2 Location of the building and land surveyed (red) ©Google Earth 2022

2. Methods

2.1 Bat roost preliminary assessment

A preliminary visual assessment was undertaken to check for field signs of bats such as droppings, urine staining, rubbing, feeding remains or other evidence that would indicate the building is used by bats. Any bat droppings seen were identified by colour, texture, and size, and a sample was collected for DNA testing, which may be required for certain species. An assessment of the potential for roosting within any accessible voids or cavities within the building was undertaken, and any possible access points that have potential to be used by bats were identified.

During the preliminary assessment, a visual assessment was conducted of any buildings, structures or trees likely to contain suitable roosting locations for bats.

The preliminary visual assessment survey was completed at an optimal time for the inspection of buildings and structures for bat roosts. Areas searched did not appear to have been cleaned/swept prior to survey.

This survey has been prepared in accordance with the Bat Conservation Trust's "Bat Surveys Good Practice Guidelines" (Collins, 2016).

The results of the preliminary visual assessment indicate that the building has Moderate/High potential to be used by roosting bats, so two further bat emergence surveys were recommended.

2.2 Bat emergence surveys

Emergence surveys were carried out on 29th June 2023 and 8th August 2023.

Three bat surveyors were stationed at vantage points around the building, and had good visibility of all parts of the building.

Each surveyor was equipped with a bat detector (Peersonic RPA3) and recorded all bat calls that were heard throughout the survey. Bats emerging from the building were recorded on survey sheets and general comments on bat activity in the area were also noted.

The survey method complies with guidelines produced by the Bat Conservation Trust (Collins, 2016).

2.2.1 Night Vision Aids

Infra-red and/or thermal video filming equipment and tablets was used to increase visibility once light levels dropped, and to record the locations of any emerging bats. Bat call data were reviewed using Sonobat bat call analysis software and video footage was reviewed using VLC player. All trainee video footage and all bat call analysis review was undertaken by a senior ecologist.

Table 1 Survey details

Date of survey visit	Start and end times and time of sunset	Structure reference / location	Equipment used (all surveys)	Weather
29 th June 2023	Start: 21:19 End: 23:04 Sunset: 21:34	Abbotsford	Peersonic RPA3 Bat detectors Batbox Duet Reolink infra-red camera and Acer tablet	Dry, partly cloudy 4/8 oktas, gentle breeze F1 and a start temperature of 16°C.
8 th August 2023	Start: 20:30 End: 22:13 Sunset: 20:43	Abbotsford	Android tablet and T3S thermal camera	Dry, cloudy 8/8 oktas, gentle breeze F1/2 and a start temperature of 18°C.
Surveyors: Kari Bettoney BSc (Hons) ACIEEM AECOW (both dates), and Zoe Gilmour MA (29 th June 2023), Heather Atouguia (8 th June 2023), Emma Kelly (both dates)				


2.3 Survey constraints

Two bat emergence surveys were undertaken during June and August 2023, with very similar results on both occasions, and periods of foraging from pipistrelle, *Myotis* and lesser horseshoe bats along the stream and within the garden.

One whiskered bat was seen to emerge from the building, and there is no indication that a maternity roost is present. It was considered that a third survey would be unlikely to provide any additional data that would alter the assessment at this stage.

The calls of whiskered bats cannot be confidently distinguished from those of Brandt's bats. Identification is normally by eDNA testing of droppings or of the bat in the hand of a licensed experienced bat worker. It would not be practicable to collect droppings from a crevice at the eaves and damp vegetation below the roost entrance prevented collection of droppings for testing. Whiskered and Brandt's bats are thought to require similar mitigation so the provision should be suitable for either species.

Bats and nesting birds can be found roosting in numerous discreet locations within structures, and their field signs may not always be visible during a preliminary visual assessment. Birds can move into a structure at any time, so birds may nest within the building at some point in the future.



A low number of bat emergence surveys can only provide a snapshot of likely bat roosting activity within a structure. It is possible that bats may move into a building either before or during works, so it is impossible to completely rule out the presence of bats at some point in the future. Every effort that was reasonably practicable has been made to reduce this possibility but due to the nature of wild animals it is not possible to completely rule out the presence of protected species at a point in the future.

2.4 Breeding birds

A visual assessment of habitats suitable for breeding birds was undertaken. A search of the interior and exterior of the buildings was carried out to locate evidence of any recent or historic breeding bird species. A visual inspection of other habitats on site suitable for use by nesting birds was undertaken. Any signs of current or historic breeding birds observed during any of the surveys were also recorded.

2.5 Otter

A visual search for habitats suitable to support otters and field signs indicating use by otters was carried out.

2.6 Assessment of protected habitats and species

A visual assessment was made to assess the suitability of habitats present to support other protected species or habitats that will be impacted by the proposed development. A search for field signs of species likely to be found within the habitats present was made and any evidence was target noted.

2.7 Biological records data search

A data search was not carried out due to the small nature of the proposed development and the high number of bat species known to be present within the county of Devon. All bat species will be considered within the assessment. It was considered that a further data search would not provide any meaningful information.

2.8 Desk study

A desk study was carried out using the Defra Magic Map to search for statutory and non-statutory designated sites, and European Protected Species Licences within 2 kilometres of the site.

3. Results

3.1 Desk study

There are no statutory sites within 2 kilometres of the site, although the site is within an Impact Risk Zone for the Brampford Speke Site of Special Scientific Interest (SSSI) and Stoke Woods SSSI.

However, the nature of proposed works and scale of the development does not fit the descriptors for developments that would require consultation with Natural England or a Habitats Regulations Assessment (HRA).

There is one European Protected Species Licence (EPSL) for bat roosts within 2 kilometres from the building.

There are seven European Protected Species Licences (EPSL) for bat roosts within 5 kilometres from the building (see Table 1).

Table 2 European Protected Species Licences within 5 kilometres

European Protected Species Licences (Bats) within 5 kilometres of the site	Species	Breeding Roost?
Licence number: EPSM 2010-2662 (Less than 1km from Abbotsford)	Species on the licence Common pipistrelle Brown long eared Licence Start Date 18/01/2011 Licence End Date 31/12/2011	No
Licence number: EPSM2010-2184	Species on the licence Common pipistrelle Soprano pipistrelle Brown long eared Lesser horseshoe Greater horseshoe Natterer's Licence Start Date 15/09/2010 Licence End Date 14/09/2012	Yes
Licence number: EPSM2010-2361	Species on the licence Common pipistrelle Brown long eared	No

	<p>Lesser horseshoe</p> <p>Licence Start Date 09/11/2010 Licence End Date 08/11/2012</p>	
<p>Licence number: 2016-26656-EPS-MIT</p>	<p>Species on the licence</p> <p>Soprano pipistrelle Brown long eared Lesser horseshoe Greater horseshoe</p> <p>Licence Start Date 06/01/2017 Licence End Date 06/01/2017</p>	No
<p>Licence number: 2016-26884-EPS-MIT</p>	<p>Species on the licence</p> <p>Common pipistrelle Soprano pipistrelle Brown long eared bat Serotine</p> <p>Licence Start Date 17/02/2017 Licence End Date 17/02/2017</p>	No
<p>Licence number: 2018-33206-EPS-MIT</p>	<p>Species on the licence</p> <p>Soprano pipistrelle Brown long eared</p> <p>Licence Start Date 01/05/2018 Licence End Date 01/05/2028</p>	No
<p>Licence number: 2018-33206-EPS-MIT- 1</p>	<p>Species on the licence</p> <p>Soprano pipistrelle Brown long eared</p> <p>Licence Start Date 10/07/2018 Licence End Date 10/07/2028</p>	No
<p>Licence number: 2016-25810-EPS-MIT</p>	<p>Species on the licence</p> <p>Common pipistrelle Soprano pipistrelle</p> <p>Licence Start Date 26/09/2016 Licence End Date 22/09/2021</p>	No

3.2 Preliminary bat roost assessment

At least eight potential bat access points were identified within the roof and building structures at Abbotsford including a large wide gap at the eaves near one of the rear windows, suitable for use by horseshoe bats (see site photographs).

Further bat emergence surveys were recommended as a result of these findings and to provide a full assessment of current use of the building by roosting bats (if any).

This is to ensure the development complies with the Wildlife and Countryside Act 1981 and The Conservation of Habitats and Species Regulations 2019 (as amended) (see Section 6 for legislation).

3.3 Bat emergence survey

Table 3 Emergence survey information

Date	Start and end times	Species and numbers	Roost type	Structure	Roost location	Access points
29 th June 2023	Start: 21:19 End: 23:04 Sunset: 21:34		-	Abbotsford	-	-
8 th August 2023	Start: 20:30 End: 22:13 Sunset: 20:43	Whiskered (1 bat)	Day	Abbotsford	Within eaves/lintel	In lintel above window at the northern end of the eastern aspect

3.3.1 1st dusk emergence survey

The first dusk emergence survey was completed on 29th June 2023.

No bats were observed to have emerged from the building during the survey.

Soprano pipistrelle *Pipistrellus pygmaeus* and common pipistrelle *Pipistrellus pipistrellus* bats were heard and seen foraging and flying in the garden from 21:54 and 21:50 respectively, and throughout the first part of the survey until around 21:30 when pipistrelle activity dropped.

Calls made by *Myotis* bats, thought to be whiskered bats, were heard within the garden, with bats observed commuting along the stream and foraging in the garden from 22:04 onwards. Noctule *Nyctalus noctula* bats were heard flying over the site at 22:23.

A rarer Annex II lesser horseshoe bat *Rhinolophus hipposideros* was observed light sampling early in the garden under shrubs close to the rear house wall, at 21:12, and 21:14. It is possible it emerged unseen as it was first heard only 24 minutes after sunset indicating the bat roost is close. It is possible that it also uses the gap above the window to enter/leave the loft void. It was seen flying without echolocation being picked up as these bats produce very directional quiet calls that cannot be picked up at a distance so the low number of calls does not fully represent the observed activity.

Weather conditions were good for bat activity throughout the survey.

The stream and garden were used by the majority of bats recorded, and this habitat feature forms an important feature for foraging and commuting bats and links buildings to the wider countryside via a dark corridor through the village.

A total of 187 identifiable bat calls from five species were recorded by a surveyor by the stream.

Table 4 Emergence survey results: 29th June 2023

Any emerging bats marked*		
Species	Number of calls recorded in 1 hour 45 minutes by the stream on 29/06/2023	Timing of first bat call
<i>Myotis</i> bats (Whiskered/Brandt's)	52	22:04
Common pipistrelle	120	21:50
Soprano pipistrelle	5	21:54
Common noctule	9	22:23
Lesser horseshoe	1	22:15

3.3.2 2nd dusk emergence survey

The first dusk emergence survey was completed on 8th August 2023.

A whiskered bat was observed to have emerged from a gap near a window on the northern end of the eastern aspect of the building at 21:16.

Soprano pipistrelle and common pipistrelle bats were heard and seen foraging and flying in the garden and along the stream throughout the survey from 21:29 and 21:31 respectively. Lesser horseshoe bat calls were recorded by one surveyor in the rear garden at 21:12 and by the other surveyor in the garden at 21:17. The bat was seen flying back and forwards under and around shrubs in the garden, along the rear wall of the house early in the survey. The behaviour may

have been light-sampling behaviour as it was only 28 minutes after sunset. Not all calls were recorded due to the bats distance from the surveyors so the low number of calls does not accurately represent the activity observed by surveyors. It is possible the bat emerged unseen from the gap at the window as light conditions at this time made visibility suboptimal, and infra-red camera light levels were not yet optimal for clear observation. The rear garden is surrounded by trees and the shrubs provide shaded areas for light sampling and foraging bats.

Weather conditions were good for bat activity throughout the survey.

Table 5 Emergence survey results: 8th August 2023

Emergence survey: 2 Date: 8 th August 2023		
Any emerging bats marked*		
Species	Number of calls recorded in 1 hour 45 minutes by the stream on 08/08/2023	Timing of first bat call
<i>Myotis</i> bats (Whiskered/Brandt's)	8	21:16*
Common pipistrelle	26	21:03
Soprano pipistrelle	70	21:29
Common noctule	6	21:31
Leisler's bat	4	22:34
Lesser horseshoe	2	21:12

3.4 Breeding birds

No signs of recent or historic breeding birds were observed using the building during the survey. There is low potential for use by crevice-nesting bird species to use the gaps above the rear window lintel on the building to enter further into the loft void, but no evidence of breeding birds was observed during any of the surveys.

3.5 Otter

The stream has Low potential to be used by commuting or foraging otters, possibly during quieter periods of the night. No otter field signs were observed within the site or along the stream although some areas were obscured by vegetation. It is considered unlikely that the stream depth and degree of disturbance provide suitable habitat for an otter holts that could be disturbed or damaged by the proposed works, although it is not impossible that otters may use the stream to commute or forage at certain times of year.

3.6 Habitats

The building is surrounded by hard standing and lawned garden areas with some native and ornamental tree spaces. It is understood that this will not create any additional footprint, so no additional ecological impact on any vegetated habitats is foreseen.

If any loss of grassland is proposed, then further measures or surveys may be needed.

3.7 Lighting

The rear of the building and stream are currently unlit, with minimal windows facing from this aspect, resulting in minimal light spill from the building. There is currently no domestic lighting on the exterior of the property, with the nearest streetlights on the western side of the house in Thorverton. The garden and stream are sheltered from the lighting by the height of the main house. The stream within the rear garden provides a well-linked dark corridor which provides optimal foraging and commuting habitats for bats and gives access to the wider landscape from roosts within the village of Thorverton.

3.8 Site photographs





5. Ceiling void above boards (inaccessible) in extension



6. Gaps around chimney



7. Crevices suitable for roosting bats at verge



8. Crevices around and under slate

4. Assessment

4.1 Assessment of potential impact on bats

The emergence survey results indicate that a single whiskered bat is currently roosting at Abbotsford.

Without mitigation and direct ecological supervision, works to replace the window on the northern end of the eastern aspect will negatively impact this roosting bat and may block access to the roost, or kill or injure roosting bats, and damage or destroy a bat roost.

This impact would be at the Site level.

Therefore, a derogation licence from Natural England will be required to allow the works to proceed lawfully, and to safeguard the bat by avoiding killing or injury, and ensure the functional conservation status of the roost is maintained by providing suitable, appropriate and adequate compensation, mitigation and enhancements.

4.1.1 Other ongoing works

The likelihood of impacting bats when carrying out works to other parts of the building is considered to be unlikely, but can never be completely ruled out.

Therefore, to avoid any negative impact due to unexpectedly finding a bat, the following Precautionary Method Statement must be followed by all workers at all times during the construction.

Works to remove any other windows, roof or other building materials, timber or other coverings should be carried out carefully with careful checks made to the underside of all materials, following the Method Statement outlined in Section 5.1 and Appendix 2.

Removal of windows, roof material, timbers or other building materials may open up suitable access points for bats if the roof is open overnight or small crevices are created as the new structure is built. Therefore, the Precautionary Method Statement must be followed by all workers throughout the duration of the construction period.

This is to ensure the works avoid the chance of causing death or injury to bats, in the unlikely event of encountering unexpected bats at any point during the development.

If the Precautionary Method Statement is followed at all times, then the impact on bats is considered to be Negligible at a Site level.

4.2 Assessment of potential impact on birds

No evidence of nesting birds was observed within the buildings during the survey. Suitable bird nesting habitat exists within the wider site.

There is considered to be Negligible impact on nesting birds as a result of this development and a gain in breeding bird habitat can be achieved by the installation of the swift block (see Section 5.2 and Appendix 1).

4.3 Otter

Lighting of the stream would have negative impacts on light-sensitive species like otters. The impact of the proposed development can be reduced by the use of Light Control Glass (LCG®) or Ultraviolet Window Protection Film to reduce light spill to the east, and the use of lighting in line with Guidance Note 08/23: Bats and Artificial lighting in the UK (BCT & ILP 2023) will result in minimal light spill or disturbance for otters.

4.4 Habitats

Habitats adjacent to the buildings include amenity grass, hardstanding and paving, areas of cultivated shrubs and native and non-native trees. The stream boundary to the east creates a strong linear feature which has been shown to be used by foraging and commuting bats.

The areas to the west of the building are lit by streetlights and domestic light spill from nearby houses. Consequently, bat activity was much lower on this side of the building. The garden and stream to the east of the building was used by a significantly larger number of species and for longer periods. It serves as an important commuting route through the village, leading to open countryside to the north-west and south-east.

4.5 Lighting


The stream in the rear garden is used for commuting and foraging by a number of bat species including the light-sensitive Myotis and lesser horseshoe bat which is an Annex II species meaning this species' foraging habitats are offered an additional level of protection. There is a low likelihood that the stream may be used occasionally by commuting otters under cover of darkness.

Current light levels in the locality are low, with no rear illumination or streetlights that illuminate the garden or stream.

Lighting can have a negative impact on foraging areas and commuting routes used by light-averse species of bats, which use linear features such as hedges and lanes to navigate around the landscape. Lighting that illuminates bat commuting areas and foraging routes can cause light-sensitive bats to avoid these areas. This may create a Negative impact on the breeding and foraging success of bats that use the area.

The impact of an increase in lighting as a result of this development can be minimised by the use of Smart Glass also known as Light Control Glass (LCG®) or Ultraviolet window protection film in any new windows to prevent light spill into the garden and towards the stream.

The external lighting will be installed in accordance with current guidance issued by the Bat Conservation Trust and Institute of Lighting Professionals: Guidance Note 08/23: Bats and Artificial lighting in the UK (BCT & ILP 2023).



External lighting will be limited to low lux level lighting fixtures with no upwards illuminance only.

As a result, the installation of lighting in line with current guidance (BCT & ILP 2023) on these building aspects is not assessed to significantly increase artificial light levels currently present.

Lighting impacts on the surroundings of the building will be minimised, and details of these requirements are given in Section 5.5.

The requirements for prevention of light spill should be enforced via a condition of planning to ensure the habitat is retained for use by foraging and commuting bats.

4.6 Invasive species

No invasive species were identified that would impact or be impacted by this proposed development.

5. Mitigation and bat licence

5.1 Bats

The results of the bat surveys indicate that the house is used by at least one roosting whiskered bat.

The roost for this bat will be destroyed by works to replace a window. Therefore, the roost must be recreated within the building or replaced with a bat box in a suitable location as close to the existing roost as practicable. The gap into the loft above the window should be retained or replaced with a horizontal access point at least 30cm wide by 20cm high to allow the lesser horseshoe to enter and leave the loft as close to the existing gap as practicable.

The existing gap above the window should be retained as an enhancement for the lesser horseshoe bat; if this is not practicable then a new access point must be created in the replacement timber. The dimensions of the retained gap should be sufficient to allow the lesser horseshoe bat to use the loft to roost. This species needs a horizontal access point of at least 30cm (width) x 20cm (height).

5.1.1 Mitigation and enhancements for bats

A woodcrete bat box **suitable for whiskered bats** should be mounted as close to the existing roost as practicable, under the eaves on the eastern aspect with a clear flight path of at least 3 metres below to compensate for the loss of the roosting location and to provide ongoing permanent roosting provision for the whiskered bat.

Boxes suitable for listed buildings are available and can be ordered in a range of colours to suit the specific specification.

Suitable boxes for whiskered bats include the Greenwoods Ecohabitats (UK supplier)

- “Small hollow” bat box (see Figure 3)
- “Medium hollow” bat box (see Appendix 1)
- “Half and half” bat box (see Appendix 1)

Other suppliers are available. Any substitute for the above-named bat boxes must be agreed with the ecologist and Local Planning Authority before installation as not all bat boxes will be suitable for this species.



Figure 3 Bat box (small hollow) Greenwoods Ecohabitats (various colour available to match existing finish) See Appendix 1 for alternative boxes and specification

5.1.2 Ongoing works to the remainder of the building

Works to remove the roof coverings and underlining of the house and garage must be carried out under the Precautionary Method Statement (Appendix 1), due to the remote possibility of encountering bats that may enter the structure or parts of the new construction at any point during works.

5.2 Breeding birds

No evidence of nesting birds was recorded within the buildings during the survey.

A swift box/block should be incorporated under the eaves on the northern wall of the building to provide biodiversity enhancements for Red Listed swifts (see Figure 4 and Appendix 1 for details and specification).



Figure 4 Integrated Swift box (various designs available to suit specification)

5.3 Otter

Any new lighting must comply with the requirements for bats as per section 5.5. These measures will ensure that any otters that use the stream are not dissuaded from using these areas by novel or excessive light levels.

5.4 Invasive species

No actions required.

5.5 Lighting

The impact of an increase in lighting as a result of this development must be minimised to protect bat foraging and commuting areas from additional lighting and light spill for buildings by fitting blackout curtains or blinds to any new windows.

Any new exterior lighting must use only low-lux, low-level (2 metres or less) exterior lighting with warm white LEDs, that is hooded to point downwards and on a motion sensor and timer so it goes off when not in use.

The below strategy utilises light prescriptions detailed within this guidance to limit impacts of artificial lighting on bats. Specifically, artificial light spill will be limited over the following features:

- The proposed garden and new decking area, scattered shrubs and trees, and the stream to the east; and
- Any newly installed ecological enhancements including bat and bird boxes, where required.


Any new exterior lighting will use low-lux LED lamps, ideally warm white as this has a low relative attractiveness to invertebrates

Light levels will be minimised by installing lighting systems that deliver no greater than a 3lux average illuminance, with a maximum horizontal illuminance of 0.6 uniformity (subject to appropriate maintenance factors). Lighting will be on a motion sensor and timer so it goes off when not in use.

In order to retain pre-development light levels as best possible over habitats adjacent to the east including the stream, any new doorways or windows on the east building aspect will be fitted with a clear Ultraviolet (UV) protection window film or Smart Glass. This glazing treatment is fully clear and does not alter the appearance of glass whilst rejecting most (up to 99%) of UV light. Bats are particularly sensitive to UV light (BCT & ILP 2023); as such, limiting UV light spill from internal light sources will contribute to limiting impacts of artificial lighting on bats using habitats adjacent to the east.

The following UV protection window film (or similar) is considered suitable for the site:

<https://www.windowfilm.co.uk/buy-online/window-film-by-the-metre/uv-protection/clear-uv-window-film>



New Internal light fittings Impacts of artificial light spill resulting from newly fitted internal lighting will be mitigated by positioning new fixtures in line with recommendations within current guidance (BCT & ILP 2023). Specifically, in order to limit light spill through windows, internal lighting will be recessed into the ceiling and set back a minimum of 1m from all windows as to limit horizontal light spill.

5.6 Post-development monitoring

No post-development monitoring will be required.

6. Legislation

Protected Species Legislation

6.1 Bats

Bats and their breeding or resting places (roosts) are protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2019 (as amended). The law applies regardless of whether or not the bats are present at the time.

Under these laws it is an offence to:

- capture, kill, disturb or injure bats (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (even accidentally);
- obstruct access to their resting or sheltering places (on purpose or by not taking enough care); or
- possess, sell, control or transport live or dead bats, or parts of them.

Seven species of bat are listed as being of principal importance, in the Secretary of State's opinion, for the purposes of conserving biodiversity. Under Section 41 (England) of the Natural Environment and Rural Communities Act (2006) there is a need for these species to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

These seven bat species are barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long-eared, greater horseshoe and lesser horseshoe, and these are the subjects of National and Local Biodiversity Action Plans.

6.2 Works that can affect bats

Advice must always be sought from a licensed ecologist or the Bat Conservation Trust or Natural England before carrying out any of the following works where a bat roost is present, to prevent potentially committing an offence:

- renovating, converting or demolishing a building
- cutting down or removing branches from a mature tree
- repairing or replacing a roof
- repointing brickwork
- insulating or converting a loft
- installing lighting in a roost, or outside if it lights up the entrance to the roost
- removing commuting habitats such as hedgerows, watercourses or woodland
- changing or removing their foraging areas
- using insecticide
- treating timber

6.3 Nesting birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) from being killed, injured or captured, whilst their nests and eggs are protected from being damaged, destroyed or taken. Birds which are listed under Schedule 1 of the Act are given additional protection against disturbance.

6.4 Planning legislation

The legislative framework for the protection of habitats and wildlife within the UK in relation to development is provided through Acts of Parliament, Regulations and guidance.

The main Acts of Parliament relating to wildlife are:

The Conservation of Habitats and Species Regulations 2017' as enacted by 'The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019'

The Conservation of Habitats and Species Regulations 2017 provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

Wildlife and Countryside (W&C) Act 1981 (as amended).

Countryside and Rights of Way (CRoW) Act 2000.

Natural Environment and Rural Communities (NERC) Act 2006.


NERC Act and Countryside and Rights of Way (CRoW) Act 2000

Bats are also a European Protected Species and legally protected under the Conservation of Habitats and Species Regulations 2017, the W&C Act 1981 and the CRoW Act 2000. This legislation makes it an offence to kill, injure, capture or disturb bats and obstruct access to or damage their place of shelter. Bats are also included on S41 of the NERC Act 2006

6.5 Planning policy

Sites, habitats and species of nature conservation value can be material considerations in any planning decision and have policies at national, regional and local levels designed to safeguard their conservation status. Policies related to ecology and nature conservation are set out in the National Planning Policy Framework (Ministry for Housing, Communities and Local Government, 2019) and the Plymouth and South West Devon Joint Local Plan 2014 - 2034.

These policy documents aim to maintain and enhance biodiversity through the full considerations of important sites, habitats and species in planning decisions. Adverse impacts on such features are to be avoided, or appropriate mitigation and compensation must be



implemented to reduce the scale of the impacts. In addition, development proposals should, wherever possible, incorporate opportunities to enhance biodiversity as part of good design

6.6 National Planning Policy Framework

In an effort to simplify national planning policy in England, the National Planning Policy Framework (NPPF) was published in March 2012. It provides guidance to local planning authorities on their local plans. Chapter 11 deals with the natural environment, including biodiversity, and replaces Planning Policy Statement 9 (PPS9). The NPPF makes clear that the planning system should help minimise the impacts that development can have on biodiversity and provide net gains in biodiversity where possible. Paragraph 118 sets out how planning authorities should deal with biodiversity when considering planning applications. One element of this is the application of the 'mitigation hierarchy' (see Section 5). This places avoiding significant harm to biodiversity or mitigating such harm ahead of compensation, which is a last resort.

7. References

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Wray *et al.* (2010). Valuing Bats in Ecological Impact Assessment. CIEEM In Practice Volume70 p23-25. (December 2010)

Bat and bird boxes

Specification, location and design

* Any variation from the specification below must be agreed with the ecologist and local planning authority

Example bat tubes to suit various build specifications	Details
 <p style="text-align: center;">COLOURS AVAILABLE</p> <p style="text-align: center;"><small>As each of the bat boxes is handmade, the colour may vary slightly from that shown.</small></p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  Brown </div> <div style="text-align: center;">  Buff </div> <div style="text-align: center;">  Charcoal </div> </div> <div style="display: flex; justify-content: space-around; align-items: flex-start; margin-top: 10px;"> <div style="text-align: center;">  Pastel Red </div> <div style="text-align: center;">  Sage Green </div> <div style="text-align: center;">  Terracotta </div> <div style="text-align: center;">  Uncoloured </div> </div>	<p>One (1) of the following bat boxes to be erected on the northern wall of the building under the eaves at a minimum height of three (3) metres with a clear flight path below.</p> <p>Manufacturer: Greenwoods Ecohabitats Model: Small Hollow Material: Woodcrete</p> <p>Box is available in various colours to suit specification (extract from Greenwoods Ecohabitats)</p> <p>Manufacturer: Greenwoods Ecohabitats Model: Medium Hollow Material: Woodcrete</p>



Manufacturer: **Greenwoods Ecohabitats**
Model: **Half and Half Bat Box**
Material: Woodcrete

Bird boxes



One (1) of swift block/brick to be built into the northern wall of the building under the eaves at a minimum height of three (3) metres with a clear flight path below.

Swift brick/block (integrated)

Various designs are available to accommodate different build specification

To be built into the northern aspect of the new building under the eaves with a clear flight path below

Appendix 2 Precautionary method statement

A copy of this statement must be kept on site and all times and communicated to all workers before any works commence.

The method statement must be followed at all times by all workers

- Workers must work carefully when lifting tiles, flashing, timbers, or other roof coverings or removing soffits or fascias or other materials and look carefully for roosting bats.
- Workers must check the underside of each roof sheet/tile or piece of flashing for roosting bats.
- If a bat is found, the bat must be carefully covered back up if it is safe to do so without crushing or injuring the bat. If the bat cannot be covered back up safely then it must be captured using thick gloves and placed in a secure box with small air holes, which is then placed in a cool area.
- **If bats are found unexpectedly at any point during the works, and all works must pause and the ecologist must be contacted immediately via 07762 051481.** If the ecologist cannot be contacted, then the National Bat Helpline must be contacted on 0345 1300 228 before proceeding.

Nesting birds

- To prevent inadvertent damage to breeding birds, their nests and young, a breeding bird check must be completed a minimum of 48 hours before works commences to ensure there are no nesting birds.
- In the unlikely event that birds are found to be using the buildings, works must be postponed until the chicks have fledged, which may be for a period of several weeks. All species of birds are protected when nesting, brooding eggs or rearing chicks right up to fledging. **The ecologist should be contacted immediately via 07762 051481 if nesting birds are found in or within 5 metres of the work area.**