Preliminary Bat Roost Assessment and Bird Survey for,
Smith Brothers Farms Limited.
Building at,
Southwood,
Canwell Drive,
Canwell,
Sutton Coldfield,
B75 5SG.

Map Ref SK 1440 0000
28th October 2021.

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Contents.

Summary.

- **There is evidence of bats using the buildings as a place of shelter.**
- **There was no evidence of birds nesting in the building.**
- **There is a roosting opportunity against the ridge board.**
- **Emergence surveys have shown one brown long eared bat using the building as a Day roost. No other bats have been seen entering or leaving the building in 2018 or 2019.**
- **A replacement bat loft can be created on site if planning permission is granted in the existing brick built animal pen and house on the site as a dedicated as a bat loft or in a two car timber framed garage.**
- **A brick built bat box can be installed in the gable apex of the converted building to be built on the site to provide new bat roosting opportunities as required by the National Planning Policy framework (2018).**
- **A method of working must be put in place with contractors to ensure that in the event of bats being found they will not be injured.**

Introduction.

This report has updated an earlier survey of the property at Southwood Barn, Canwell. The property was visited on the 28th October 2021.

An inspection and building survey for bats was requested by C T Planning on behalf of their client, Smith Brothers Farms Limited. The survey was to be undertaken in relation to the submission of a planning application to Lichfield District Council to convert the existing building to a dwelling. The property was visited on the 19th February 2018 and the surveyor spent 1 hour on site.

Temperature; 7°C Wind; 0-1 Beaufort Scale Cloud Cover; 8/8th.

Legislation concerning bats.

The Wildlife and Countryside Act 1981 (WCA) protects bats and their roosts in England, Scotland and Wales. Some parts have been amended by the Countryside and Rights of Way Act 2000 (CRoW) which applies only in England and Wales, and by the Nature Conservation (Scotland) Act 2004 which applies in Scotland.

The Conservation and Habitats Regulations 2010 (better known as the Habitats Regulations) implements the Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora. All bats are listed as 'European protected species of animals'

Under Regulation 41 of the Conservation of Habitats and Species Regulations 2010 it is illegal to:

- Deliberately capture, injure or kill any wild animal of a European Protected Species (EPS),

- Deliberately disturb wild animals of an EPS (affecting ability to survive, breed or rear young) – disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young,
- Deliberately disturb wild animals of an EPS (impairing ability to migrate or hibernate) – disturbance of animals includes in particular any disturbance which is likely to impair their ability in the case of hibernating or migratory species to hibernate or migrate,
- Deliberately disturb wild animals of an EPS (affecting local distribution and abundance) – disturbance of animals includes in particular any disturbance which is likely to affect significantly the local distribution or abundance of the species to which they belong,
- Deliberately disturb wild animals of an EPS (whilst occupying a structure of place used for shelter or protection) – intentionally or recklessly disturb any wild animal while it is occupying a structure or place which it uses for shelter or protection,
- Damage or destroy a breeding site or resting place of a wild animal an EPS.

Under the Wildlife and Countryside Act 1981 (as amended) it is illegal to:

- Recklessly or intentionally kill, injures or take any wild animals included in Schedule 5.
- Recklessly or intentionally damage or destroy, or obstruct access to any structure or place which any wild animal included in Schedule 5 uses for shelter or protection,
- Recklessly or intentionally disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.

Legislation concerning birds.

All common wild birds are protected under The Wildlife and Countryside Act 1981 (and as amended). Under this legislation it is an offence to:

- kill, injure or take any wild bird
- take, damage or destroy the nest of any wild bird while it is in use or being built
- take or destroy the egg of any wild bird

Certain rare breeding birds are listed on Schedule 1 of The Wildlife and Countryside Act 1981 (and as amended). Under this legislation they are afforded the same protection as common wild birds and are also protected against disturbance whilst building a nest or on or near a nest containing eggs/unfledged young.

Methodology for bats.

The building surveys have been undertaken in accordance with Bat Surveys for Professional Ecologists- Good Practice Guidelines, 2016, the Bat Conservation Trust. Surveys of the buildings were undertaken during the daytime to look for evidence of bats using the buildings, or likely roosting sites. The evidence of bats using a building as a place of shelter can include bat droppings, grease marks, urine stains or actual bats. This evidence is then considered when planning evening emergence counts and activity surveys, using bat detectors. These surveys provide evidence of where bats are roosting and activity across the site by foraging or commuting bats.

The Bat Surveys for Professional Ecologists- Good Practice Guidelines, 2016, specify that emergence surveys are undertaken dependent upon the roost potential of the buildings on the survey site, as set out below;

Roost potential.	**Number of surveys.**
High.	3
Low to moderate.	2
Low.	1

The surveys are started at sunset, with bats emerging from roosts at different times, dependent upon the species, and continued for two hours. Emergence surveys can only be undertaken from the beginning of April to the end of September when bats are active. The optimum period of undertaking surveys is the beginning of May to the end of August. Their emergence is dependent upon the weather, the bats only leaving their roost on warm nights when there will be sufficient insect prey around to make flight worthwhile. While bats will emerge in light rain and moderate winds, the surveys would not be undertaken when there is heavy rain and/or strong winds as this would not provide reliable data upon which to base the conclusions of the surveys. Mild weather in April and September will produce bat activity, particularly providing information on forage areas, commuting routes and pre-maternity group roosting.

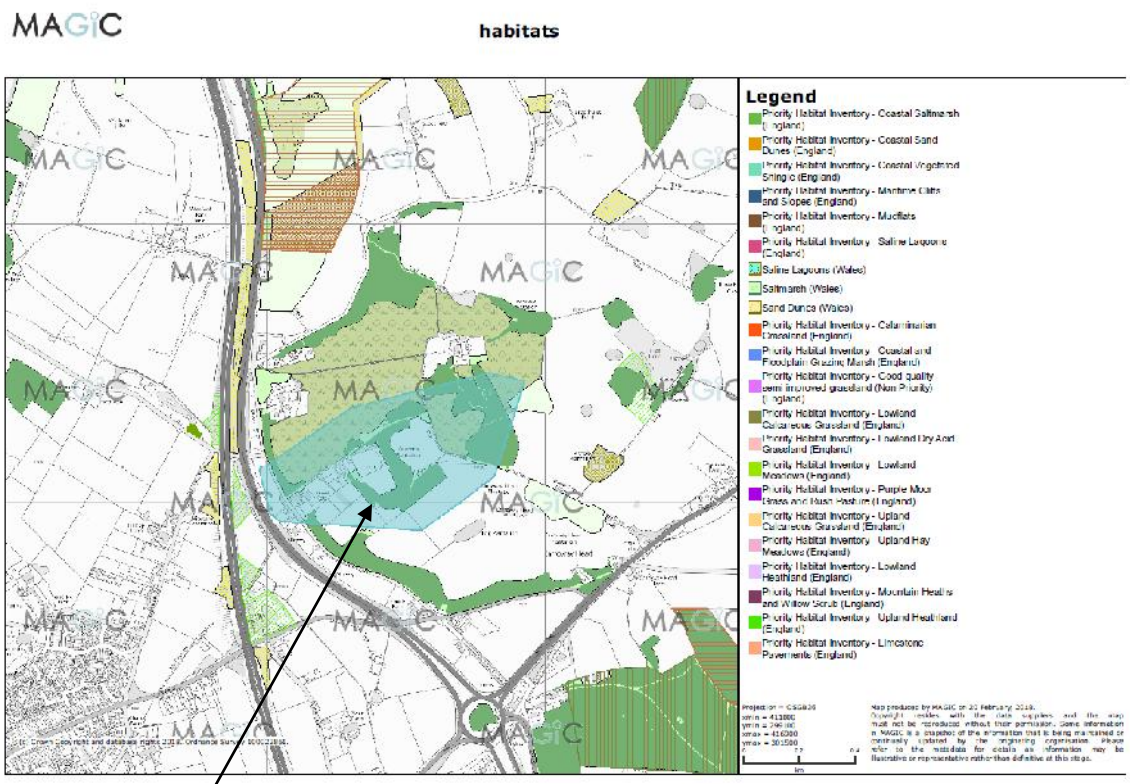
Any trees on site are surveyed following the methodology set out in the Bat Tree Habitat Key, Henry L Andrews et al 2013, which produces a key for identifying Potential Roost Features in trees and their likleyhood of being used by bats. Trees on any site being surveyed will have Potential Roost Features identified from ground level surveys and highlighted in the report.

Bat records and habitats.

A search of public records has revealed the presence of;

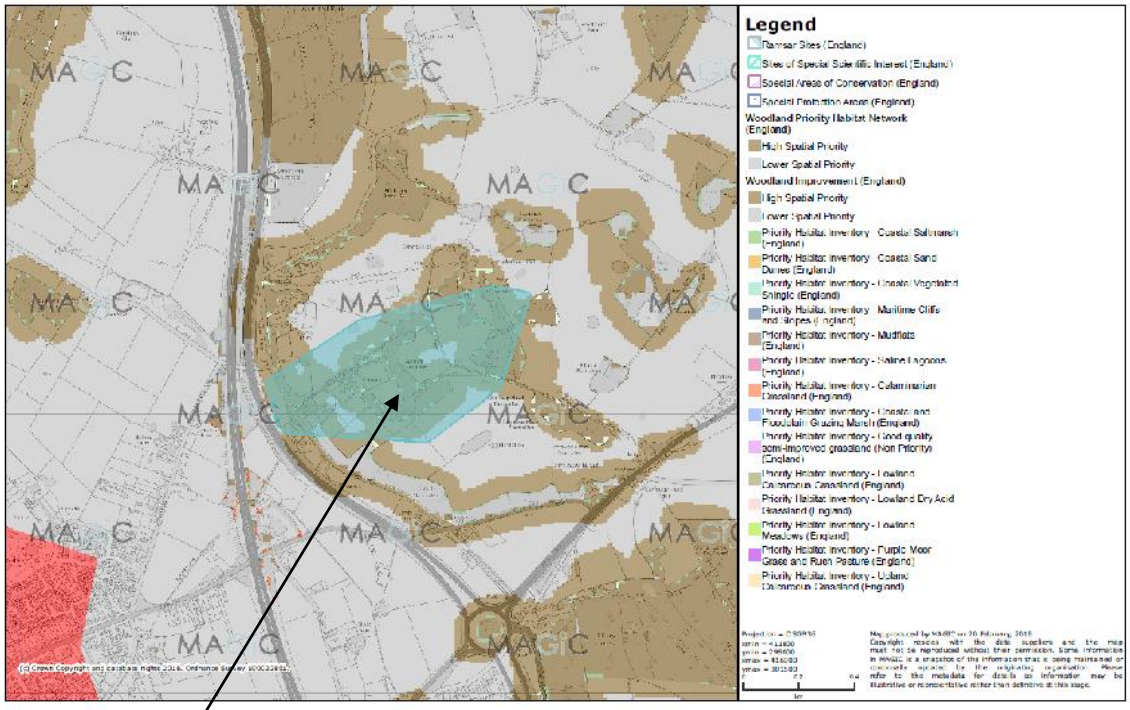
Epesicus serotinus.
Myotos daubentonii.
Myotis Mystacinus/Brandtii.
Myotis Mystacinus.
Myotis Nattereri.
Nyctalus noctula.
Pipistrellus Nathusii.
Pipistrellus pipistrellus.
Pipistyrellus pygmeaus.
Plecotus auritus.

A search of the DEFRA MAGIC Dataset shows that the site falls within an area of Deciduous Woodland on the Priority Habitat Inventory. There is an area of Woodpasture and Parkland Biodiveristy Action Plan Priority Habitat to the north of the site. There is agricultural land surrounding the site. There are small areas of deciduous woodland on the Priority Habitat Inventory and areas of Young Trees on the National Forestry Inventory in the landscape. To the north and south of the site are areas of Woodland that is classified as Ancient Woodland. To the west is an area of Traditional Orchard on the Priority Habitat Inventory.



Southwood Barn.

A search of the DEFRA MAGIC Dataset shows that the site falls inside of a Farm Wildlife Package area where there are Woodland Improvement areas. There is Countryside Stewardship support for Lapwings. There are no other biodiveristy enhancement areas adjacent to the site.



Southwood Barn.

A search of the DEFRA MAGIC Dataset shows that there have been a number of European Protected Species licenses granted locally. None of the sites is adjacent to the property being surveyed. The plan of the locations of the granted licenses is to be found in Appendix 4.

Species.	**Destruction of or damage to a breeding site.**	**Destruction of or damage to a resting place.**
Soprano pipistrelle, Brown long eared bats	Yes	Yes
Common pipistrelle bats.	No	Yes
Brown long eared bats.	No	Yes
Whiskered bats.	No	Yes.
Common pipistrelle, Soprano pipistrelle, Whiskered bats.	Yes	Yes
Soprano bats.	No	Yes

Constraints.

The building survey was undertaken in the winter when evidence of bats internally can still be seen but external evidence may be unavailable after heavy rain. The surveyor does not believe that the weather masked any evidence or access points for bats. There were no constraints to the surveyor for access in the building survey for bats.

Building Survey.

The buildings to be surveyed consisted of a single storey solid brick barn with a pitched roof. The roof is covered with a breathable roofing membrane and has plain tiles above.

There is a small brick built animal pen at the northern end of the site.

There is agricultural land and woodland surrounding the site. There are large gardens with mature trees and areas of Parkland to the north which provide forage opportunities for bats and commuting routes. Sited in the woodland there are good forage opportunities for bats from the

building. There are mature trees in the hedgerows and trees between the fields which provide commuting routes for bats. There are areas of woodland in the countryside around the site and this woodland would provide foraging habitat for bats.

The results of the building survey are presented as the likelihood of bats using an area/feature;

None.	Bats are unlikely to use the feature/area in any way.
Poor.	Bats may use the feature/area but it is not thought to be likely.
Possible.	The feature/area provides an area that may be used by bats but no direct evidence of occupation was found.
Definite.	Clear evidence of the use of a feature/area as a place of shelter, such as droppings.

This is a solid brick walled building with a pitched roof. The eaves are corbel brickwork with two areas of damaged brick giving access to the inside of the building.


There are a number of broken plain tiles but there are no gaps giving access to the space between the rear of the plain tiles and the breathable roofing membrane.




The northern verge is sealed and there is no access for bats but on the southern gable there is access beneath the verge where a brick is missing..


The roof is supported on timber purlins and rafters. There is a ridge board along the full length of the building.

A single Brown long eared bat was seen roosting against the ridge board in the northern part of the building.


Bat roosting opportunities; Definite.

Animal pen and house.

This is a solid brick walled structure with a mono pitched roof. There are timber rafters with some degraded polycarbonate sheets or slates above.

The building offers only very temporary places of shelter for bats which are exposed to weather penetration. The building could provide a temporary place of shelter for individual bats during periods of warm weather. This place of shelter is very poor and unlikely to be used.

Bat roosting opportunities; Very Poor/None.

Emergence surveys.

In order to provide data upon bat movements on site, to determine whether bats are roosting in buildings and to allow the identification of bats emerging from buildings, one evening emergence survey and one dawn survey were undertaken. The number of surveys undertaken on each building was determined with reference to the Bat Survey Guidelines for properties with moderate roost potential.

The aim of each survey was to look at different areas of the buildings to determine if bats were emerging from a roost and to assess bat activity across the site. The surveys were undertaken using heterodyne and frequency division bat detectors from which it is possible to identify bats by their different ultrasound call. Bat passes were recorded during ten minute periods from sunset. Where a bat was seen it was recorded on a plan of the site to provide information upon movements across the site. As bats close in on their prey their echolocation calls get closer together sounding like a buzz. These feeding buzzes are recording as they confirm the presence of prey and bats feeding in the area.

The surveys were undertaken using Batbox Duet frequency division bat detectors with an Edirol R09 recording device, a Batbox Baton frequency division bat detector with an Olympus WAV sound recorder, a Batbox Baton XD Time Expansion bat detector with Olympus wav recorder , an Elekon Batscanner and Magenta 5 heterodyne bat detectors.

28th June 2018.

Sunrise.	04.45
Air Temperature.	14.4°C at the start of 9.4°C at the end of the survey .
Wind.	Beaufort Scale 1.
Cloud cover.	0/8th.

Survey started 03.03 and ended at 04.55.

Surveyor. S. Christopher Smith.
Positioned to the north west of Building.

Time.	Direction.	Activity.	Species.	Notes.
03.31	Not Seen	Commuting	Brown long eared	
03.33	Not Seen	Commuting	Common pipistrelle	
03.35	A	Commuting	Common pipistrelle	
03.39	Not Seen	Commuting	Common pipistrelle	
03.40	Not Seen	Commuting	Common pipistrelle	
03.41	B	Foraging	Brown long eared	
03.48	C	Commuting	Common pipistrelle	

Surveyor. Martin Kessel, trainee bat worker.
Positioned to the south east of the Building.

Time.	Direction.	Activity.	Species.	Notes.
03.30	Not Seen	Foraging	Common pipistrelle	
03.37	A	Foraging	Common pipistrelle	
03.41	C	Foraging	Brown long eared	
03.43	B	Foraging	Common pipistrelle	
03.48	B	Foraging	Brown long eared	
03.52	C	Foraging	Brown long eared	
03.56	C	Re-entered	Brown long eared	

6th July 2018.

Sunrise.	04.43
Air Temperature.	21.6°C at the start of 15.7°C at the end of the survey .
Wind.	Beaufort Scale 0.
Cloud cover.	0/8th.

Survey started 03.02 and ended at 04.48.

Surveyor. S. Christopher Smith.
Walking around the Building.

Time.	Direction.	Activity.	Species.	Notes.
03.26	Not Seen	Commuting	Soprano pipistrelle	
03.26	Not Seen	Commuting	Brown long eared	
03.27	Not Seen	Commuting	Common pipistrelle	
03.30	Not Seen	Commuting	Brown long eared	
03.35	Not Seen	Commuting	Common pipistrelle	
03.36	Not Seen	Foraging	Common pipistrelle	
03.37	Not Seen	Commuting	Common pipistrelle	
03.38	Not Seen	Commuting	Common pipistrelle	
03.39	Not Seen	Foraging	Common pipistrelle	2 passes
03.40	Not Seen	Commuting	Common pipistrelle	3 passes
03.41	Not Seen	Commuting	Common pipistrelle	2 passes
03.42	Not Seen	Foraging	Common pipistrelle	Intermittent foraging till 03.45
03.46	Not Seen	Commuting	Common pipistrelle	

03.55	A	Commuting	Common pipistrelle	
03.57	Not Seen	Foraging	Common pipistrelle	2 passes
03.59	Not Seen	Foraging	Common pipistrelle	
04.00	Not Seen	Commuting	Common pipistrelle	4 passes
04.04	Not Seen	Commuting	Common pipistrelle	
04.05	B	Commuting	Common pipistrelle	
04.05	Not Seen	Commuting	Common pipistrelle	
04.09	Not Seen	Commuting	Common pipistrelle	
04.11	Not Seen	Commuting	Common pipistrelle	
04.12	C	Foraging	Common pipistrelle	04.12 to 04.13
04.18	Not Seen	Commuting	Common pipistrelle	
04.21	Not Seen	Commuting	Common pipistrelle	
04.24	Not Seen	Commuting	Common pipistrelle	

15th July 2018.

Sunset.	21.27
Air Temperature.	25.1°C at the start of 21.9°C at the end of the survey .
Wind.	Beaufort Scale 1.
Cloud cover.	3/8th.

Survey started 21.03 and ended at 23.14.

Surveyor. S. Christopher Smith.
Positioned to the North of Building.

Time.	Direction.	Activity.	Species.	Notes.
22.38	Not Seen	Commuting	Common pipistrelle	
22.47	Not Seen	Foraging	Common pipistrelle	
22.49	Not Seen	Commuting	Common pipistrelle	
22.54	Not Seen	Commuting	Common pipistrelle	
22.55	Not Seen	Commuting	Common pipistrelle	

Surveyor. Sophie Gooding, trainee bat worker.
Positioned to the west of Building.

Time.	Direction.	Activity.	Species.	Notes.
22.06	Not Seen	Commuting	Common pipistrelle	
22.08	Not Seen	Foraging	Common pipistrelle	
22.23	D	Commuting	Common pipistrelle	
22.29	C	Commuting	Common pipistrelle	
22.39	Not Seen	Commuting	Common pipistrelle	
22.48	Not Seen	Foraging	Common pipistrelle	
22.51	Not Seen	Commuting	Common pipistrelle	
22.54	Not Seen	Foraging	Common pipistrelle	
22.58	Not Seen	Commuting	Common pipistrelle	

Surveyor. Lucy Mackinson, licensed bat worker.
Positioned to the south of building.

Time.	Direction.	Activity.	Species.	Notes.
22.07	A	Foraging	Common pipistrelle	3 passes
22.23	B	Commuting	Brown long eared	

22.29	C	Foraging	Common pipistrelle	
22.39	B	Foraging	Common pipistrelle	
22.51	Not Seen	Commuting	Common pipistrelle	
22.54	Not Seen	Commuting	Brown long eared	

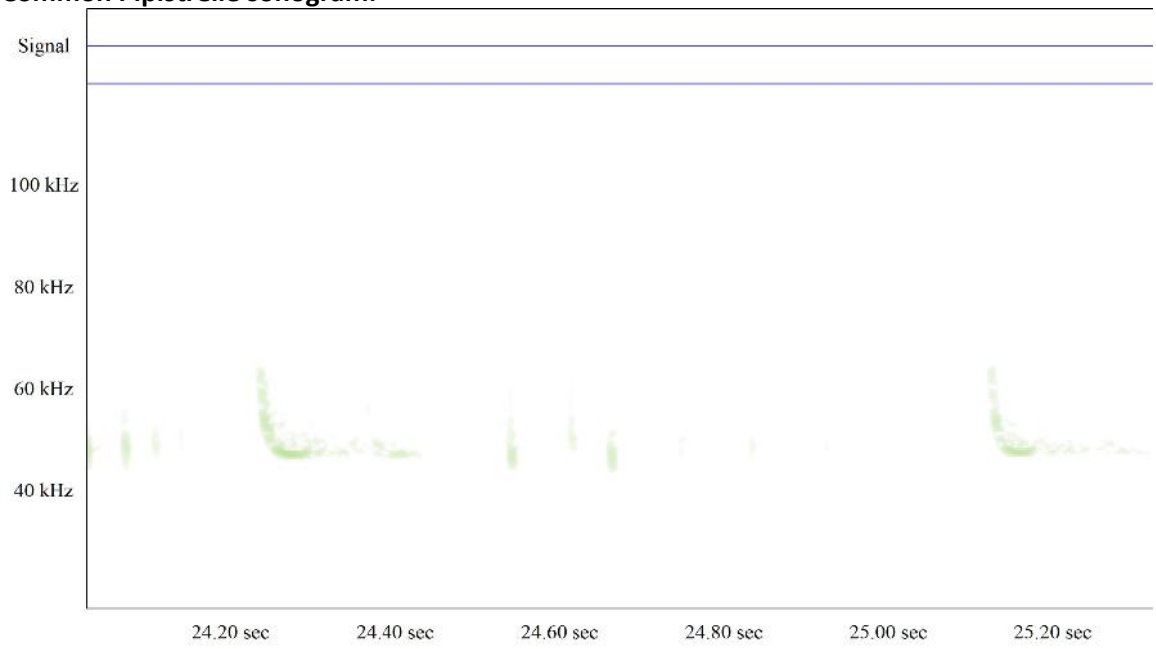
Surveyor. Lydia-Rose Cox, trainee bat worker.
Positioned to the east of building.

Time.	Direction.	Activity.	Species.	Notes.
22.07	A	Foraging	Common pipistrelle	Foraging around woodland
22.30	B	Foraging	Brown long eared	
22.40	C	Commuting	Common pipistrelle	
22.53	Not seen.	Commuting	Common pipistrelle	

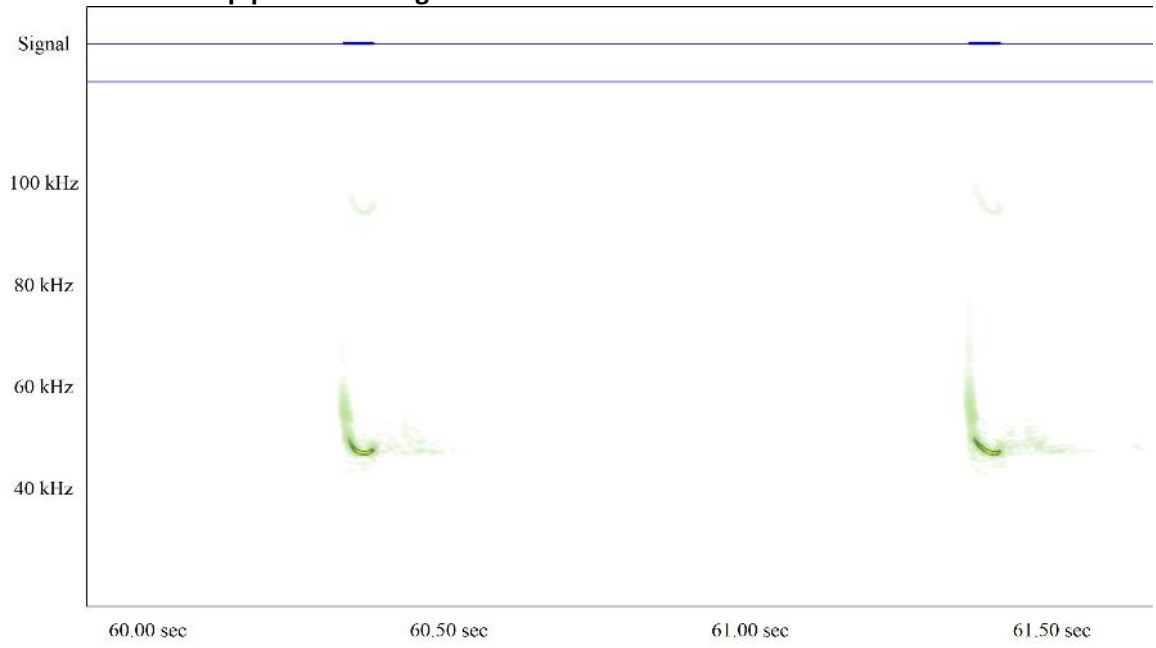
Analysis of the recordings from the bat detectors have confirmed the presence of Common Pipistrelle bats and Brown long eared bats.

The bats were commuting across the site with no forage calls recorded. The sonogram shows the typical 'hockey stick' shape for all pipistrelle echolocation calls, an initial frequency modulated downwards sweeping call followed by the constant frequency peak frequency area. The peak frequency can be seen to be around 45kHz on the peak frequency graph, confirming that the bat was a Common Pipistrelle.

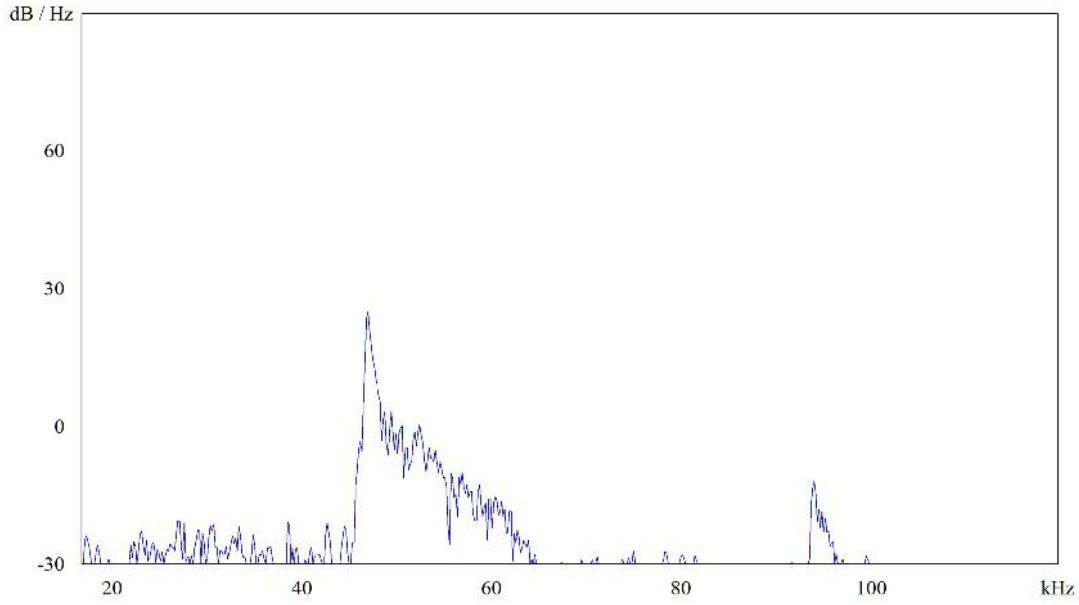
Common Pipistrelle sonogram.



Detailed Common pipistrelle sonogram

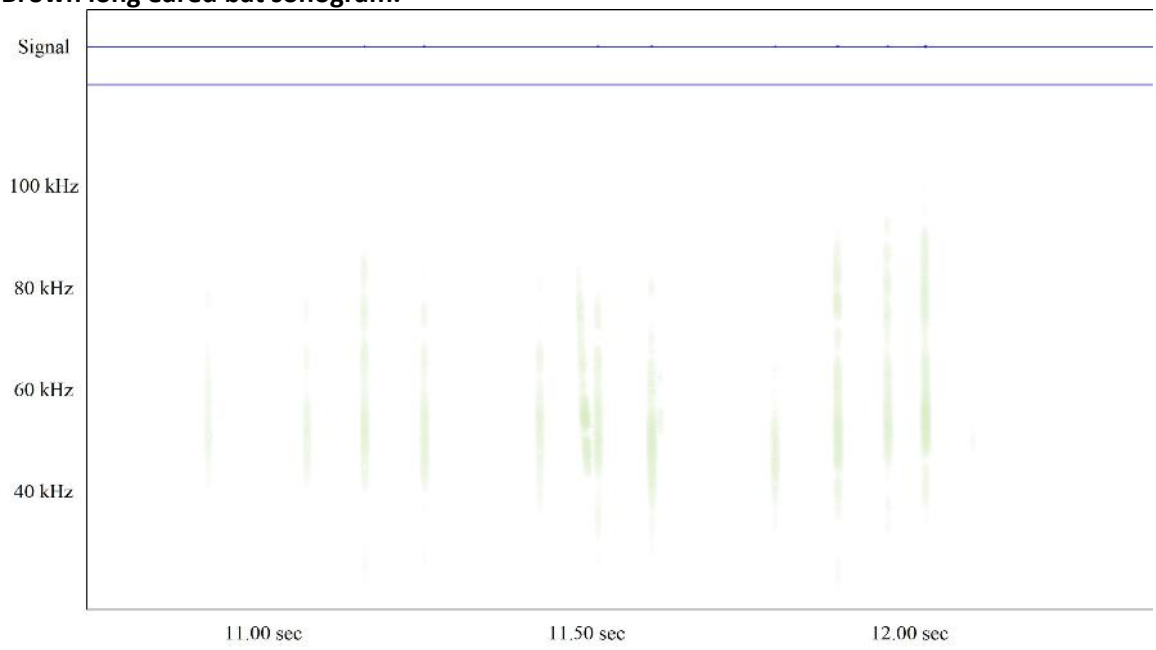


Common Pipistrelle peak frequency.

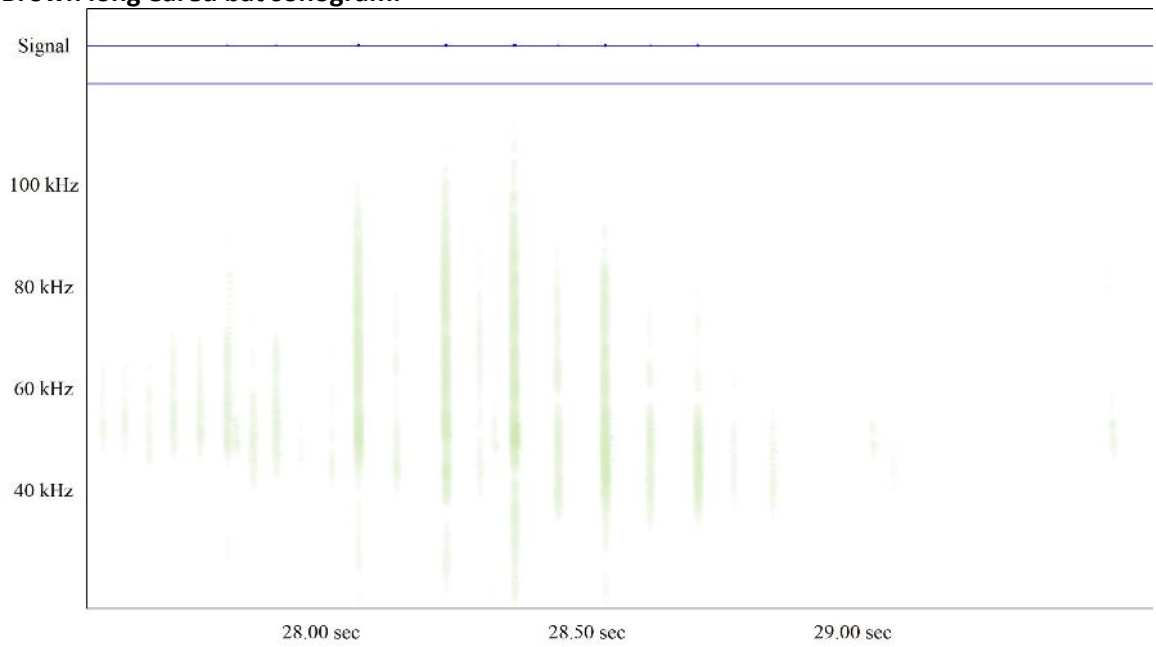


The presence of Brown long eared bats was confirmed by the bats being seen in flight. The calls are very quiet and show a faint frequency modulated call with a split in the call making it appear as a staggered downwards line.

Brown long eared bat sonogram.



Brown long eared bat sonogram.



28th June 2019.

Sunrise. 04.47
Air Temperature. 10.8°C at the start of 8.1°C at the end of the survey .
Wind. Beaufort Scale 0.
Cloud cover. 0/8th.

Survey started 03.15 and ended at 05.05.

Surveyor. S. Christopher Smith.

Time.	Direction.	Activity.	Species.	Notes.
03.47	Not Seen	Foraging	Common pipistrelle	
03.51	A	Commuting	Common pipistrelle	
04.04	B	Foraging	Common pipistrelle	Foraging around building 04.04 to 04.06

Surveyor. Sophie Gooding, trainee bat worker.

Time.	Direction.	Activity.	Species.	Notes.
03.37	Not seen	Commuting	Common pipistrelle	
03.48	Not seen	Commuting	Common pipistrelle	
04.04	B	Foraging	Common pipistrelle	Foraging around building 04.04 to 04.06
04.10	Not seen	Commuting	Common pipistrelle	

19th July 2019.

Sunrise.	05.10
Air Temperature.	17.9°C at the start of 13.1°C at the end of the survey .
Wind.	Beaufort Scale 1.
Cloud cover.	3/8th.

Survey started 03.15 and ended at 05.09.

Surveyor. S. Christopher Smith.
Positioned to the south of Building.

Time.	Direction.	Activity.	Species.	Notes.
03.30	Not seen	Commuting	Common pipistrelle	
03.34	Not seen	Commuting	Common pipistrelle	2 passes
03.38	Not seen	Commuting	Brown long eared	
03.40	Not seen	Commuting	Common pipistrelle	
03.47	Not seen	Commuting	Common pipistrelle	
03.48	Not seen	Foraging	Common pipistrelle	
03.52	Not seen	Commuting	Common pipistrelle	
03.53	Not seen	Commuting	Common pipistrelle	2 passes
04.02	Not seen	Commuting	Common pipistrelle	
04.07	Not seen	Commuting	Common pipistrelle	
04.12	Not seen	Foraging	Common pipistrelle	2 passes
04.18	Not seen	Commuting	Common pipistrelle	2 passes
04.22	Not seen	Commuting	Common pipistrelle	
04.25	Not seen	Foraging	Common pipistrelle	2 passes

04.27	Not seen	Commuting	Common pipistrelle	2 passes
04.28	Not seen	Commuting	Common pipistrelle	2 passes
04.29	Not seen	Commuting	Common pipistrelle	
04.31	Not seen	Commuting	Common pipistrelle	Faint 2 passes
04.35	Not seen	Foraging	Common pipistrelle	
04.36	A	Foraging	Common pipistrelle	
04.44	Not seen	Commuting	Common pipistrelle	

Surveyor. Sophie Gooding, Trainee Bat Worker.
Positioned to the north of Building.

03.46	Not seen	Commuting	Common pipistrelle	
03.47	To north east of building	Foraging	Common pipistrelle	Continous foraging to north east of building until 04.47. Sometimes 2 bats seen
04.37	1	Foraging	Common pipistrelle	

Birds.

There was no evidence of birds nesting in the building but there are opportunities for birds to nest in the building. There are nesting opportunities in the animal pen and house but there is no evidence of birds nesting in the building.

Conclusion.

There was evidence of bats using the building as a place of shelter in 2019. The single Brown long eared bat seen during the survey makes this a Hibernation roost.

The site was visited on the 28th October 2021 and the Bat Consultant inspected the property for any changes in the building or new evidence of bat use. There had been no change in the structure of the building and there was no new evidence of use bat bats.

In order to be able to determine whether bats are using the building five emergence and dawn surveys have been undertaken over the period of peak bat activity in 2018 and 2019.

A Brown long eared bat was seen to enter the building on the 28th June 2018 at 03.56.

The building is being used as a Day roost and Hibernation roost by Brown long eared bats.

A European Protected Species (EPS) license will be required to be able to convert the building to a dwelling should planning permission be granted.

The bat consultant recommends that a new bat loft is created for both hibernation and day roosting.

Roosting for other bat species recorded foraging in the woodland can be created by providing a brick built bat box in the converted building. This can be done by converting the animal pen and house to a bat loft.

There was no evidence of birds nesting in the barn but there are nesting opportunities. The conversion of the barn between the beginning of March and the end of August in any year must not be undertaken until a check for nesting birds has been undertaken. If birds are nesting then no work can proceed until the young have fledged.

Proposed Development and meeting the 3 tests.

The current proposal is for the building on site to be converted from farm storage to residential accommodation. There is evidence that the building has been used by individual bats as a temporary place of shelter. In order for planning permission to be granted the Local Authority need to be able to show that the development will;

1. **"preserve public health and safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment";**

And

2. **"that there is no satisfactory alternative";**

And that the development

3. **"will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range".**

Test 1.

The change of use of the property would be beneficial to ensure the continued use of the building and the retention of bat roosting opportunities. The change of use of the property will have an economic benefit which will ensure that there will be a beneficial consequence for local bat populations by the retention of roosting opportunities. The current farm enterprise has no use of the building that would not require changes to the structure of building. Any alternative use would be beneficial in retaining the building and the timber frame. This can be done with the retention of the temporary bat roosting opportunities in the building.

Test 2.

The failure to find an economic use for the building will result in it's becoming dilapidated and roosting opportunities for local bats will be lost. There is no alternative use of the property for the original farm enterprise that would not result in the creation of rooms that can be used for any form of activity. Modern farming enterprises do not require barns of this nature. The only means by which to retain the buildings for use by local bat populations in the future is by granting a change of use and creating new roosting opportunities for local bats.

Test 3.

The surveyor will show in the mitigation section that bat roosting opportunities can be created in such a way that will not be detrimental to local bat populations or the use of the building for other purposes. The addition of new roosting opportunities to meet the requirements of the National Planning Policy Framework (2018), will increase roosting opportunities for local bats.

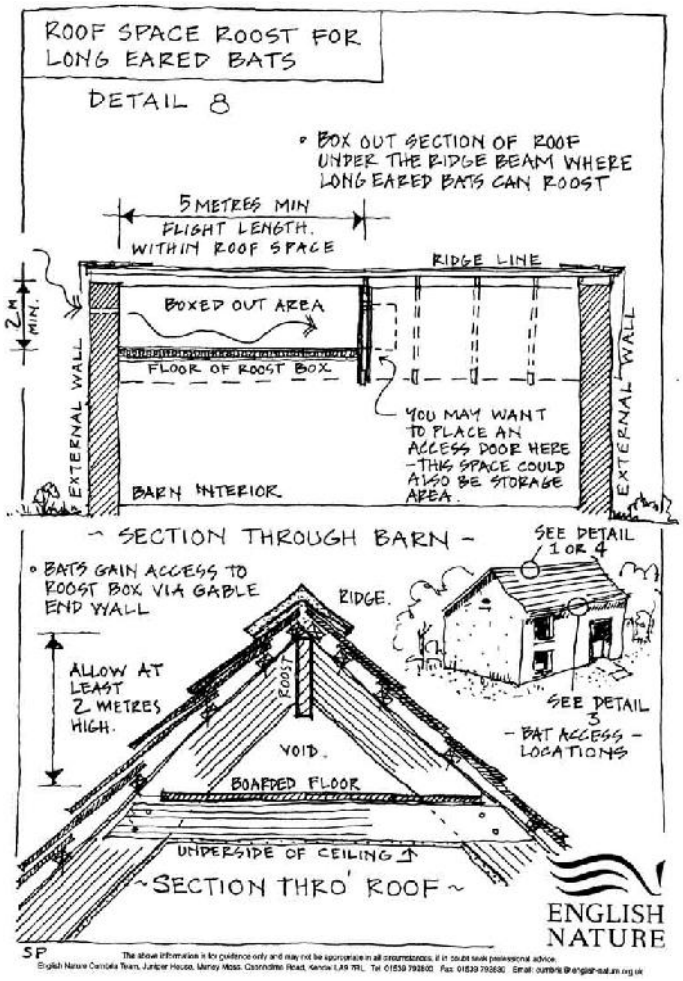
Impacts on bats.

The conversion of the property will have a major negative impact on bats due of the loss of the Hibernation and Day roosting in the roof space. The method of working below must be followed to ensure that the potential for disturbing or harming bats, however small, is minimized and avoided.

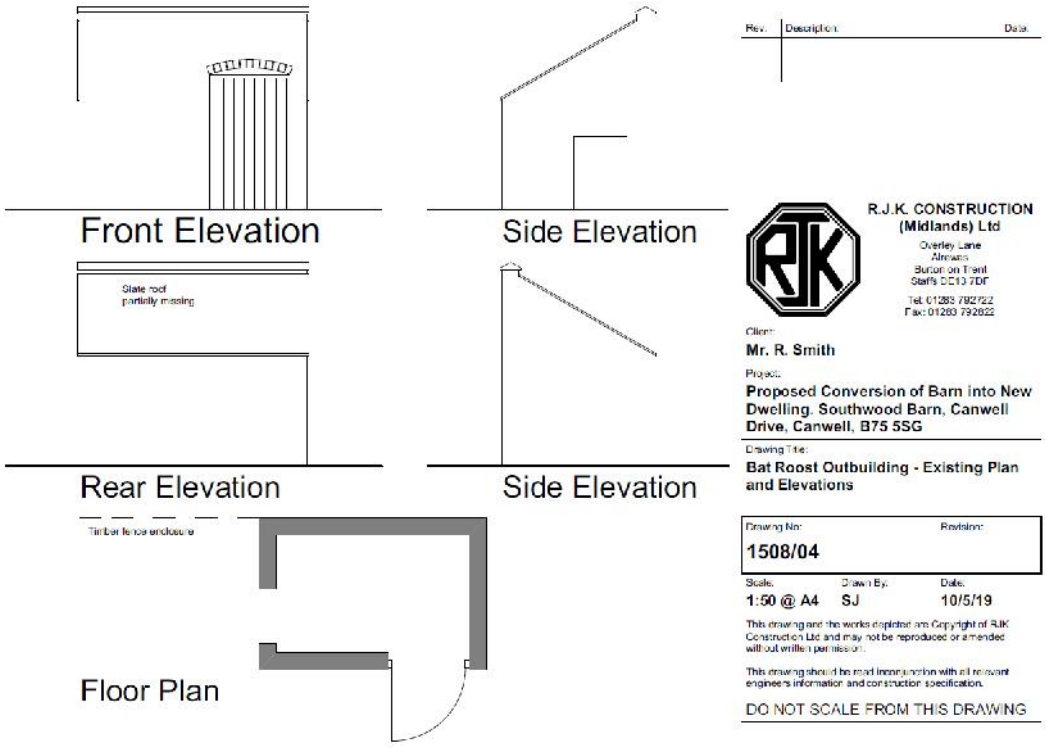
There is no loss of habitat from the proposed development and there will be no impact on habitat, forage or commuting routes from the proposed development.

Mitigation for bats.

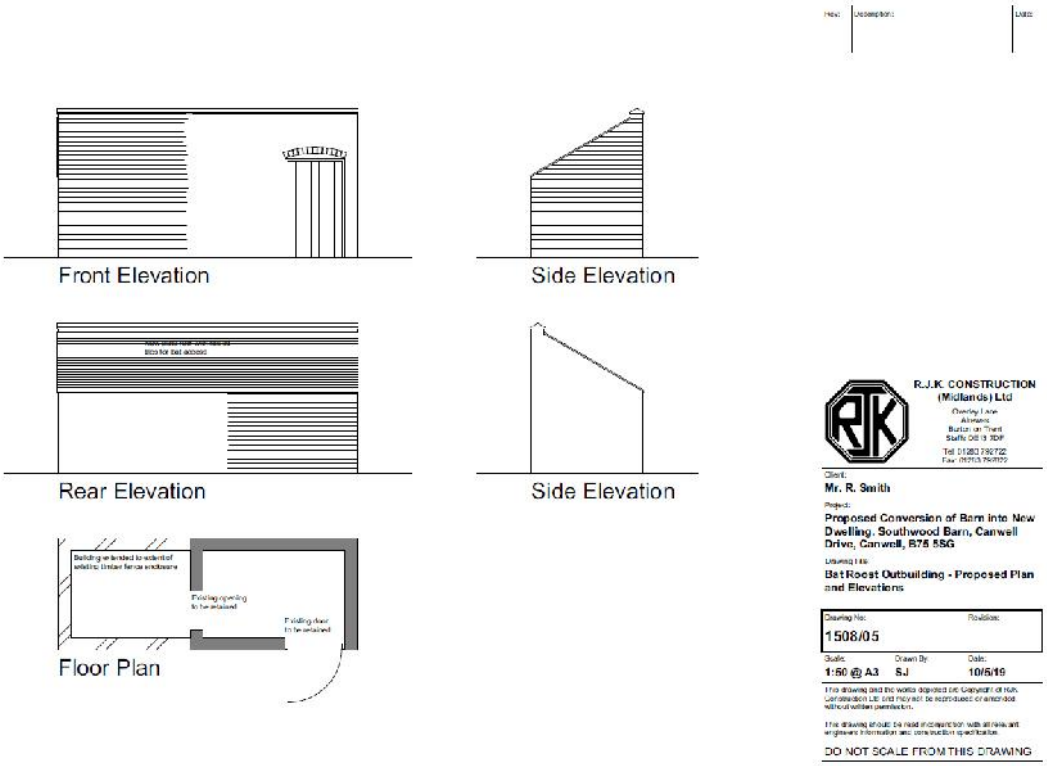
The loss of the hibernation roosting for the Brown long eared bat will require an EPS license. This will require that a new roof space roost is created for the Brown long eared bat. This can be created by building an oak framed double garage adjacent to the barn. The roof space of this building can be used as a bat loft. A double car garage will provide the 5m length that is minimum required by Natural England for Brown long eared bats.



An alternative would be for the animal pen and house can be refurbished to create a dedicated bat house.



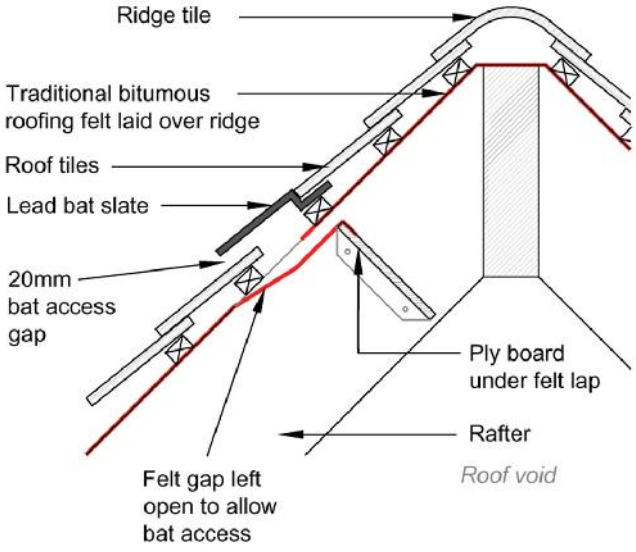
The building has a brick area and a timber enclosed area. The building can be refurbished by replacing the timber enclose with brickwork. The roof will be replaced with a new timber structure with a bitumous underfelt and the existing slate roof extended.



Access to the building for bats will be created by installing a lead bat slate into the roof as per the detail below.

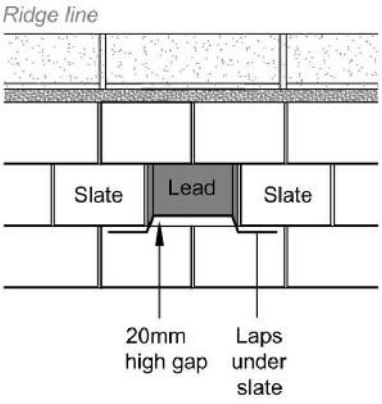
BAT ACCESS 'SLATE' DETAIL 1B - with access to roof void

SECTION: BAT ACCESS 'SLATE' 1B
Not to scale



Elevation: BAT ACCESS 'SLATE' DETAIL 1B
Not to scale

Bat slate built into slope



Photograph of bat slate

TAMWORTH PROPERTY SERVICES
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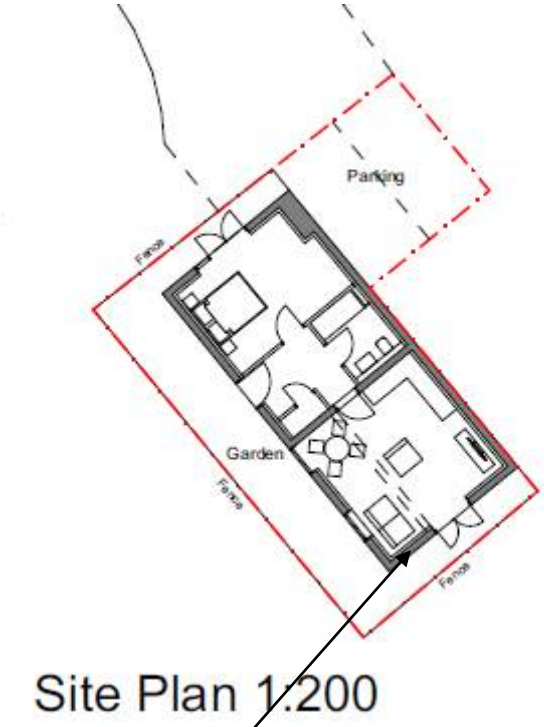
Records show that there are populations of crevice dwelling bats locally. New roosting opportunities for these species of bats can be created when the new dwelling is built if planning

permission is granted, to meet the requirements of the National Planning Policy Framework (2012).

A brick built bat box can be installed at the gable apex of southern elevation of the new dwelling, should planning permission be granted. These are constructed from brick or concrete blocks and are built into the outer leaf of brickwork. They can have facing bricks or be rendered. They provide no access to the cavity wall.

They are made by a number of companies including Wienerberger, Ibstock Brick, Habibat and Schwegler.

A location away from doors and windows has been chosen so that droppings falling from the bat box will not cause a nuisance for the occupiers. The south facing elevation will also benefit from solar gain and will provide a warm roost for crevice dwelling bats.



Brick built bat box.

There should be no direct illumination of the new bat roosting opportunities. Lighting around the site will be by low wattage down lights at low level to provide security and safety lighting for the dwelling and service area. This lighting will be set no higher than the head height of the ground floor windows and will minimise the possible disturbance to bats in this area. Any security lighting will use PIR's to ensure they turn off automatically once the movement has ceased.

The method of working has been set out so that it can printed and handed to contractors on site.

Method of working.

There is evidence of bats using the buildings as a place of shelter and it is possible that individual bats may use the possible roosting site against the ridge board at different times of year. Because of this possibility a method of working should be put in place when there are contractors on site. This would cover work to the roof or demolition where there was access for bats.

The species of bat that may possibly be found on site is the Brown Long Eared bat. These are a medium sized bat, larger than a Pipistrelle with very long ears that meet in the centre of the head. These bats may be found in crevices in the brickwork, behind ridge boards or in splits in the larger roof timbers.

- When tiles are removed they should be lifted away from the roof and not slid or twisted to avoid injuring any bats roosting beneath the tiles.
- Ridge tiles should be lifted without sliding so as to avoid injuring any bats roosting beneath them.
- If a bat is found under a roof tile or ridge tile, the tile should be carefully replaced and work in that area stopped until such time as a licensed bat worker can attend the site.
- The bat can then be removed to a place of safety until such time that it can be released at night.
- The demolition of any part of the building where bats could potentially roost should be by hand. This includes the removal of roof tiles, ridge tiles, soffits, gutter fascia boards and hanging tiles. If a bat is found the work should be stopped immediately and a bat worker called to come and deal with the bat. The bat should not be handled except by a licensed bat worker. Any bats found will be taken into care for release on site later dependent upon the time and weather.
- Bats discovered during the winter period will be taken into care, feed and kept healthy until they can be released on site in the Spring.
- Bats will not be released on site until evening temperatures are consistently above 6^{o}C, at least three nights, the wind is light, and there is no rain.
- Bats taken into care over the winter will be released to the new roost opportunities in Spring if they are available using the same release criteria as above.

Legislation concerning bats.

The Wildlife and Countryside Act 1981 (WCA) protects bats and their roosts in England, Scotland and Wales. Some parts have been amended by the Countryside and Rights of Way Act 2000 (CRoW) which applies only in England and Wales, and by the Nature Conservation (Scotland) Act 2004 which applies in Scotland.

The Conservation of Habitats and Species Regulations 2010 (better known as the Habitats Regulations) implements the Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora. All bats are listed as 'European protected species of animals'.

It is an offence for any person to:

- Deliberately capture, injure or kill a bat.
- Intentionally or recklessly disturb bats, where that disturbance may significantly affect the ability of those bats to survive, breed, rear or nurture their young, or is likely to significantly affect the local distribution or abundance of any bat species, whether in a roost or not.
- Damage or destroy a place of shelter (roost) of a bat, be that a resting or breeding place.
- Possess a bat, whole or in part, alive or dead.
- Intentionally or recklessly obstruct access to a roost.
- Sell or offer for sale or exchange whole or parts of bats, alive or dead.

The fine for committing an offence is £5,000 per bat.

If a bat is found on site, work should stop in the area where the bat was found and the contractor should call the Bat Consultant; S. Christopher Smith 07967636115.

Breathable Roofing Membranes-Info Sheet

What are they?

- Traditional roofing felt was bitumen based
- Modern membranes are made from very fine and long plastic fibres that are spun into thin sheets. They be single ply or have various layers to provide a more complex membrane.
- They are known as Breathable roofing membranes or Vapour permeable underlay's (BRMs/VPUs)

Who Makes them?

- When most people talk about BRMs, they will call it Tyvek as this is the most famous brand name
- There are over 70 products in the UK alone, made by 20+ companies – never assume the product is Tyvek unless there is proof.

Why are they used?

- Modern houses are designed to be more energy efficient, meaning they tend to be warmer.
- Along with human activities this means increased levels of water vapour in the air
- When this passes up into the cold roof space, it forms condensation, which can lead to problems
- In the past gaps would have been left near the ridge and eaves to allow ventilation, but increased insulation often means this isn't possible. A breathable membrane aids this as it allows water vapour to pass out of the loft into the external air

Potential Problems

- There have been reports of bats becoming entangled in fibres pulled from the membranes
- Possibility of Temperature and humidity change
- Alot of membranes are white or brightly coloured

Advice

- At present we cannot recommend specific brands that are considered safe for use in bat roosts, as such it is recommended that bitumen felt be used where possible
- It is not against the law not to install a BRM
- If the planner insists on a BRM, suggest a dark coloured and reinforced membrane

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S.Christopher Smith MRICS MSc CEnv.

Appendix 1.

Roost Types as designated by Natural England and the Bat Surveys for Professional Ecologists, Good Practice Guidelines.

A. Day roost: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
B. Night roost: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
C. Feeding roost: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
D. Transitional / occasional roost: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
E. Swarming site: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites
F. Mating sites: sites where mating takes place from later summer and can continue through winter.
G. Maternity roost: where female bats give birth and raise their young to independence.
H. Hibernation roost: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
I. Satellite roost: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.
J. Other – Explain what the roost type is if not one of the above (it is recognised that roost types are interchangeable and not always easy to classify according to the nuances of certain species).