

**Preliminary Bat Roost Assessment and Bird  
Survey for,  
Mr. and Mrs. A. Bond.  
Buildings at,  
Fern Bank,  
Common Side,  
Gentleshaw,  
LICHFIELD,  
WS15 4NG.**

**Map Ref SK 0541 1130  
22<sup>nd</sup> December 2020.**

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**Natural England Bat Mitigation Class License**

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## **Summary.**

- **There is no evidence of bats using the dwelling as a place of shelter.**
- **There was no evidence of birds nesting in the dwelling.**
- **Emergence surveys have shown no bats emerging from the roosting opportunities on site.**
- **There are no roosting opportunities for bats in the garage/store other than very poor roosting against the roof timbers in the brick store area of the store building.**
- **The demolition and re-development of the site for a new dwelling will not have an impact on bat roosting.**
- **New bat roosting opportunities can be created by installing two brick built bat boxes in the new dwelling.**
- **There is no evidence of birds nesting in the garage/store or the sheds.**
- **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.

An inspection and building survey for bats was requested by CT Planning on behalf of Mr. and Mrs. A. Bond. The survey was to be undertaken in relation to the submission of a planning application to Lichfield District Council to demolish the existing dwelling and replace it with a new dwelling. The property was visited on the 27<sup>th</sup> January 2020 and the surveyor spent 1 hour on site. This report has been updated in December 2020 considering the changed development of the site.

Temperature; 6°C      Wind; 1 Beaufort Scale    Cloud Cover; 8/8<sup>th</sup>.



## 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 or 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;

<b>Roost potential.</b>	<b>Number of surveys.</b>
<b>High.</b>	3
<b>Low to moderate.</b>	2
<b>Low.</b>	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 likelihood 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 the following bats within 3km of the site;

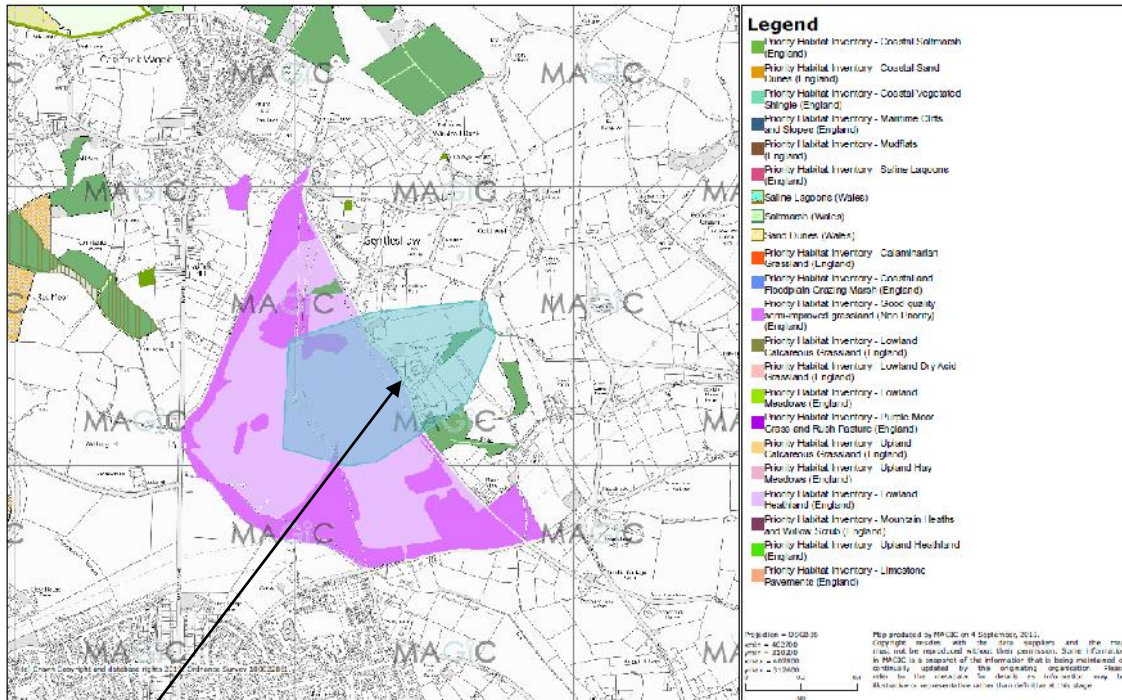
Myotis daubentonii.  
Myotis mystacinus/Brandtii.  
Myotis Nattereri.  
Nyctalus Leislerii.  
Nyctalus noctula.  
Pipistrellus pipistrellus.  
Pipistrellus pygmaeus.  
Plecotus auritus.

A search of the DEFRA MAGIC Dataset shows that the Gentleshaw Common Site of Special Scientific Interest is situated to the west of the site, which of a special nature conservation status or significance. There is an area of Deciduous Woodland on the Priority Habitat Inventory to the south of the site. There is agricultural land surrounding the site to the north, east and south. The small areas of deciduous woodland on the Priority Habitat Inventory in the landscape will provide forage opportunities for bats to forage and there is good connectivity between the woodlands, the hedgerows being a mixture of hedgerows with some mature trees and some

being post and wire fences. The forage opportunities around the site are good around the site and likely to support a variety of bats.

MAGIC

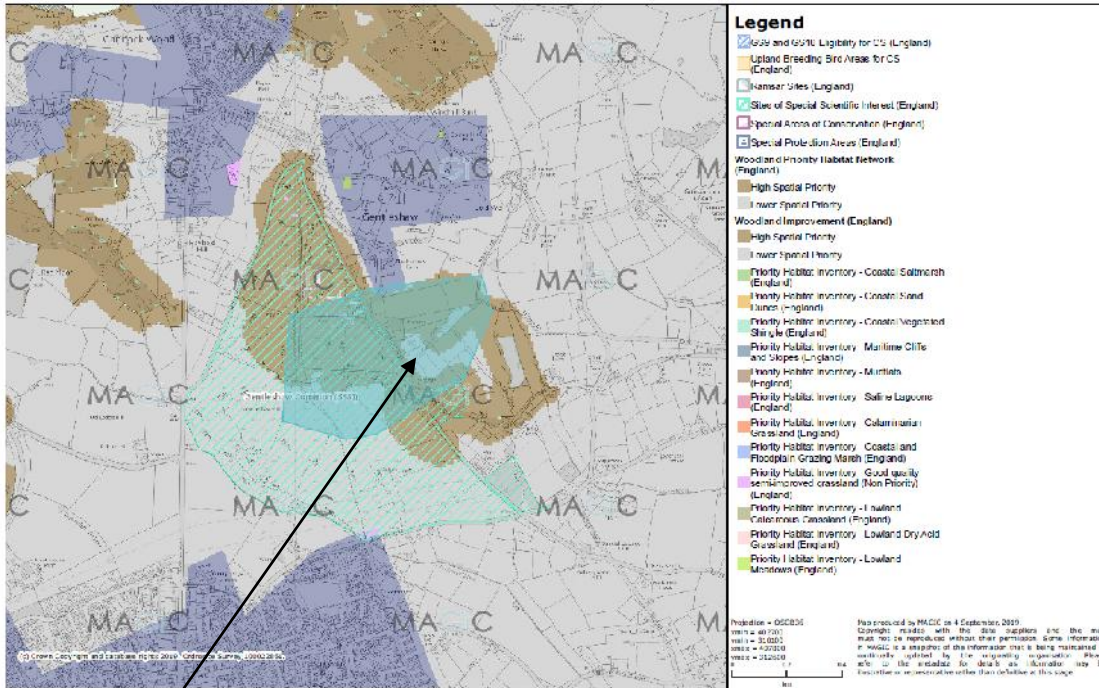
habitats



Fern Bank.

A search of the DEFRA MAGIC Dataset shows that the site falls inside of a Farm Wildlife Package area where there is support for Lapwings through Countryside Stewardship targeting. The site falls into the buffer zones around the Deciduous Woodland to the south of the site where there is support for Willow Tits. The site is opposite the Gentleshaw Common Site of Special Scientific Interest and within the buffer zone around this site. There are no other biodiversity enhancement areas adjacent to the site.

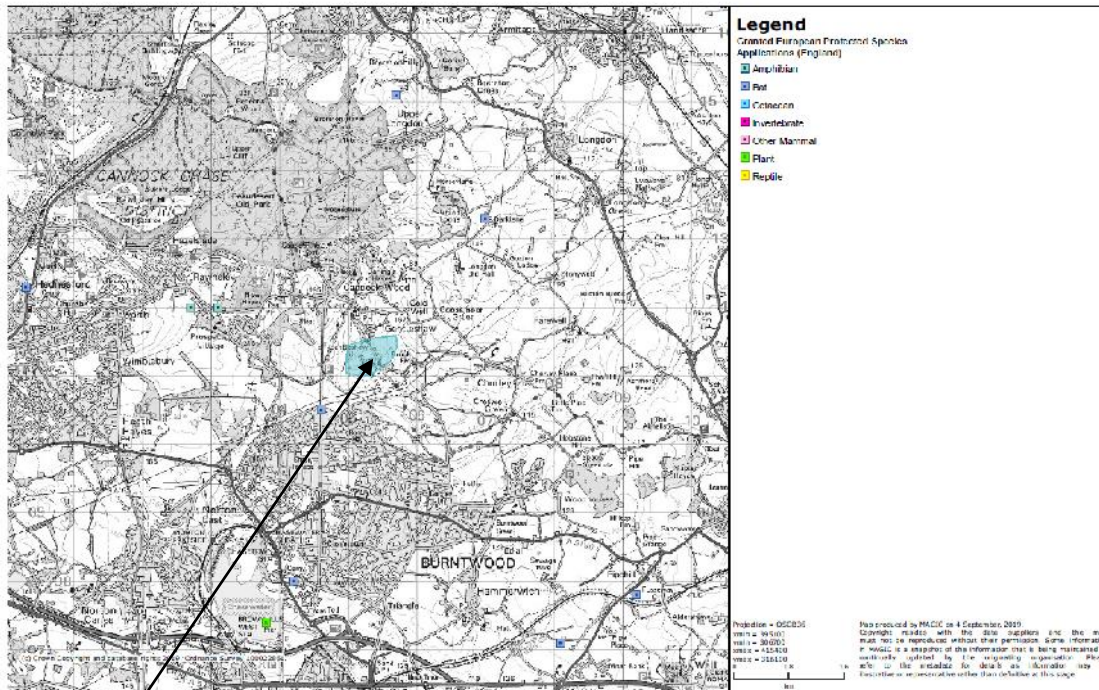




Fern Bank.

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. Those highlighted yellow were obtained by the Bat Consultant.

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



Fern Bank.

### Constraints.

The building survey was undertaken in the summer 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 two storey dwelling with cavity brick walls. The dwelling has a pitched roof with plain tiles and a bitumous underfelt. There is a single storey rear pitched roof area with plain tiles and a bitumous underfelt



There is a garage and store building to the north of the dwelling.








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.


**Dwelling**

Feature.	Evidence of bats.	Likelihood of bats roosting.	Photograph.
Behind ridge board or against roof timbers.	None.	None. There is no access to the roof space for bats and the ridge board is covered with cobwebs showing no use by bats.	






			
<b>Feature.</b>	<b>Evidence of bats.</b>	<b>Likelihood of bats roosting.</b>	<b>Photograph.</b>
In splits in timber rafters.	None.	None. Machine cut modern trussed rafter timbers.	







<p>Between the top of the blockwork and the underside of the bitumous underfelt.</p>	<p>None.</p>	<p>None. There is a gap internally but there is no access from the gables externally to this area.</p>	
<p><b>Feature.</b></p>	<p><b>Evidence of bats.</b></p>	<p><b>Likelihood of bats roosting.</b></p>	<p><b>Photograph.</b></p>

Feature.	Evidence of bats.	Likelihood of bats roosting.	Photograph.
Under ridge tiles.	None.	None. There is no access to the underside of the ridge tiles for bats.	

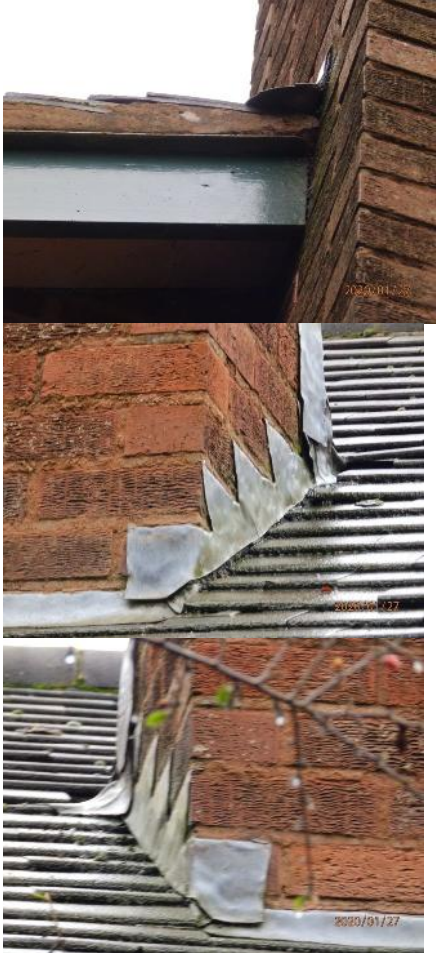


			  
<b>Feature.</b>	<b>Evidence of bats.</b>	<b>Likelihood of bats roosting.</b>	<b>Photograph.</b>
Under loose or missing roof tiles.	None.	None. The plain tiles have no access points for bats. There is one broken tile on the single storey area but the nibs are in place blocking any access for bats.	 

<b>Feature.</b>	<b>Evidence of bats.</b>	<b>Likelihood of bats roosting.</b>	<b>Photograph.</b>
In eaves.	None.	None. Timber soffits, barge board and fascia boards with no access for bats.	

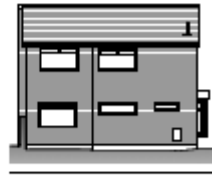
			
<b>Feature.</b>	<b>Evidence of bats.</b>	<b>Likelihood of bats roosting.</b>	<b>Photograph.</b>
In verge.	None.	Possible. There is access for bats to the verge on the northern gable where the verge adjoins the chimney and on the southern gable under the ridge tile.	  

<b>Feature.</b>	<b>Evidence of bats.</b>	<b>Likelihood of bats roosting.</b>	<b>Photograph.</b>
Under lead flashings on chimneys.	None.	Possible. There is access for bats where the lead flashing adjoins the verge on the northern gable. There is no access under other lead flashings including the lead flashing around the soil and vent pipe which has partially lifted.	 

			 <p>The top photograph shows a close-up of a wooden eave with a dark, recessed area. The middle photograph shows a brick wall with a corrugated metal roof, with a white plastic sheet partially covering the roof. The bottom photograph shows a similar scene with a brick wall and corrugated metal roof, with a white plastic sheet covering the roof and some greenery visible in the background.</p>
<b>Feature.</b>	<b>Evidence of bats.</b>	<b>Likelyhood of bats roosting.</b>	<b>Photograph.</b>



## Existing Plans and Elevations...



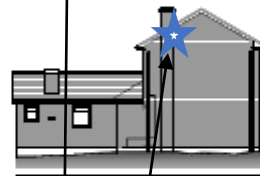
Existing Side Elevation  
scale: 1:100 @ A1



Existing Front Elevation  
scale: 1:100 @ A1



Existing Side Elevation  
scale: 1:100 @ A1



Existing Rear Elevation  
scale: 1:100 @ A1



Existing Ground Floor Plan  
scale: 1:100 @ A1



Existing First Floor Plan  
scale: 1:100 @ A1

### Existing bat roosting opportunities.

#### Garage/Store.

This is a solid brick store with a cavity brick garage adjoining.



There are plain tiles on the roof with a bitumous underfelt. There is no access under the plain tiles or the ridge tiles.









The only place of shelter is in the open store where it is possible for bats to roost against the rafters but this is thought to be unlikely due to the light and open nature of the building.

The building offers only very poor places of shelter for bats.

#### **Bat roosting opportunities; Very Poor.**

#### **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, two evening emergence surveys 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. Separate bat passes are recorded where the echolocation ends for more than 5 seconds. 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.

During the Covid 19 period of lockdown and social distancing the need to keep surveyors safe and avoid the risk of infection resulted in the decision to restrict access to the site to a single surveyor and for that surveyor to work their way around the site looking at different areas of the buildings where there was access for bats or roosting opportunities for bats. Because of this, surveys were undertaken sometimes on consecutive days or only a week apart. There was no repeat survey of the same feature at anything less than two weeks apart to ensure that the surveys of repeat areas met the requirements of the Bat Survey Guidelines.

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.

11<sup>th</sup> May 2020.

Sunset. 20.50  
 Air Temperature. 13.5°C at the start of 7.4°C at the end of the survey .  
 Wind. Beaufort Scale 0-1.  
 Cloud cover. 6/8<sup>th</sup>.

Due to the Covid 19 lockdown only one surveyor was available for the survey. There are only two roosting opportunities one was observed by the surveyor and the other was filmed with the Sony Nightshoot camera together with a Batbox Baton XD bat detector and recorder adjacent.

Survey started 20.32 and ended at 22.21.

Surveyor. S. Christopher Smith.

Time.	Direction.	Activity.	Species.	Notes.
21.19	A	Commuting	Common pipistrelle	
21.21	A	Commuting	Common pipistrelle	
21.22	B	Foraging	Common pipistrelle	2 passes
21.26	Not seen	Commuting	Common pipistrelle	
21.52	Not seen	Commuting	Common pipistrelle	
21.53	Not seen	Commuting	Common pipistrelle	

Remote bat detector.

Time.	Direction.	Activity.	Species.	Notes.
21.19.07		Commuting	Common pipistrelle	
21.21.01		Commuting	Common pipistrelle	
21.21.44		Commuting	Common pipistrelle	
21.39.53		Commuting	Common pipistrelle	





26<sup>th</sup> May 2020.

Sunset. 21.12  
 Air Temperature. 20.7°C at the start of 15.2°C at the end of the survey.  
 Wind. Beaufort Scale 0-1.  
 Cloud cover. 0/8<sup>th</sup>.

Survey started 20.49 and ended at 22.55.

Surveyor. S. Christopher Smith.

Time.	Direction.	Activity.	Species.	Notes.
21.31	A	Foraging	Noctule	
21.33	Not seen	Foraging	Noctule	
21.46	Not seen	Commuting	Common pipistrelle	Faint
21.47	Not seen	Commuting	Common pipistrelle	Faint
21.51	Not seen	Commuting	Common pipistrelle	2 passes to rear of surveyor
21.55	Not seen	Foraging	Common pipistrelle	
22.00	B	Foraging	Common pipistrelle	
22.05	Not seen	Commuting	Common pipistrelle	Faint
22.19	Not seen	Commuting	Brown long eared	Faint, 2 passes
22.25	Not seen	Commuting	Common pipistrelle	
22.30	Not seen	Foraging	Common pipistrelle	2 passes
22.34	Not seen	Commuting	Brown long eared	Faint
22.35	Not seen	Commuting	Common pipistrelle	
22.40	Not seen	Commuting	Common pipistrelle	3 passes

Surveyor. Katy Smith, Trainee Bat Worker.

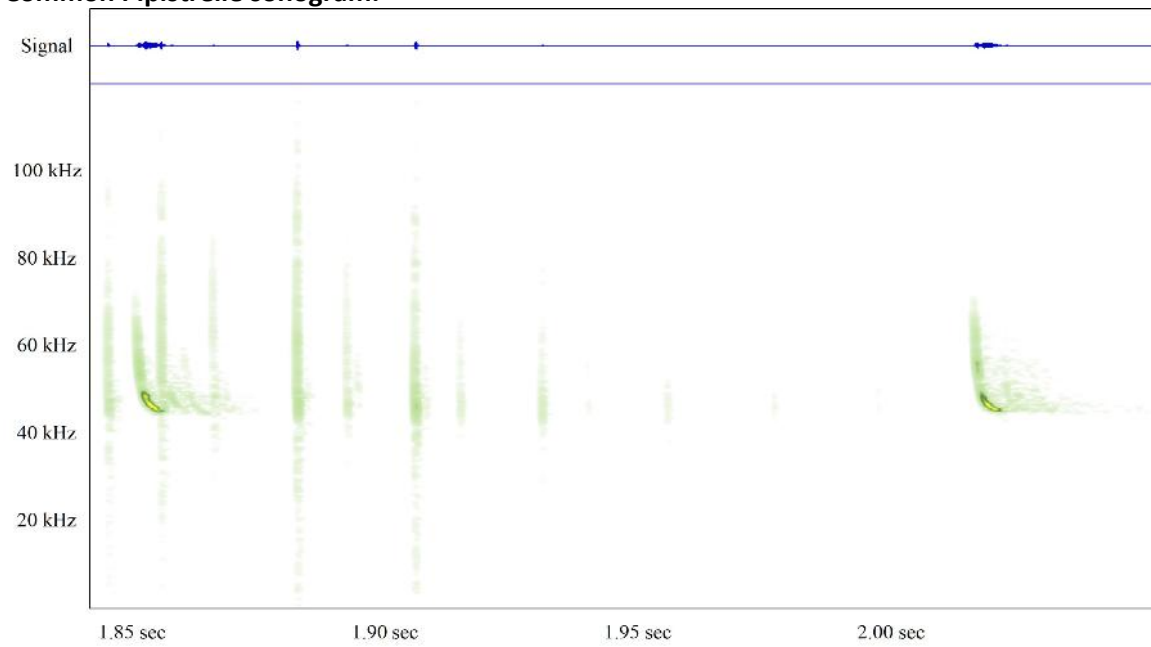
Time.	Direction.	Activity.	Species.	Notes.
21.44	Not seen	Foraging	Common pipistrelle	
21.55	1	Foraging	Common pipistrelle	
22.08	Not seen	Foraging	Common pipistrelle	
22.33	Not seen	Foraging	Common pipistrelle	
22.44	Not seen	Foraging	Common pipistrelle	



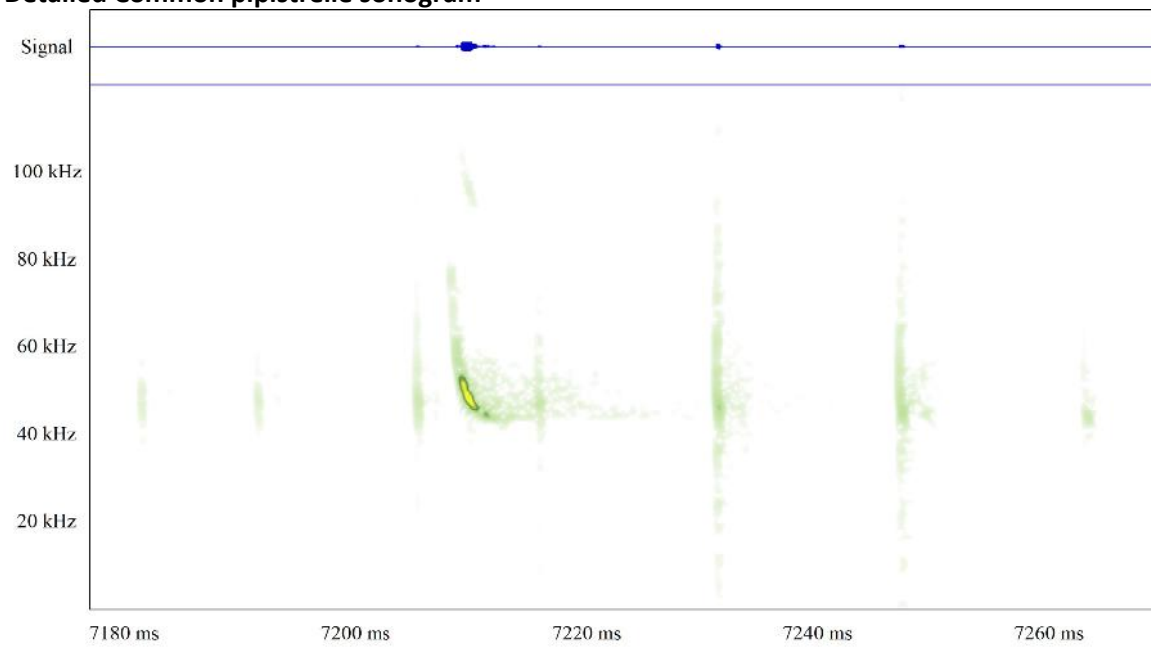
Analysis of the recordings from the bat detectors have confirmed the presence of Common Pipistrelle bats and Soprano pipistrelle bats.

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.

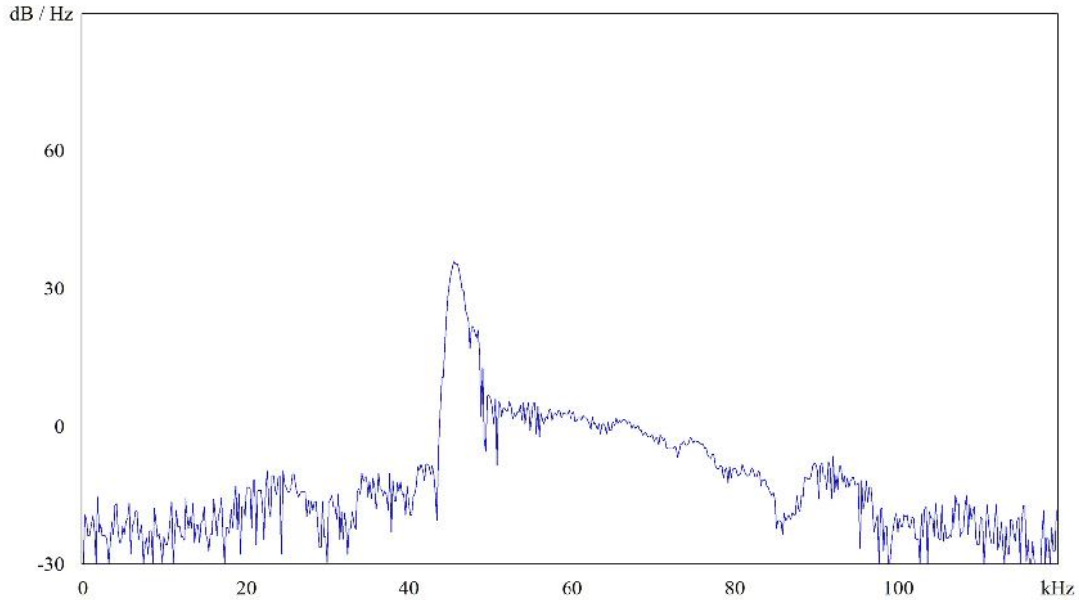
**Common Pipistrelle sonogram.**



**Detailed Common pipistrelle sonogram**

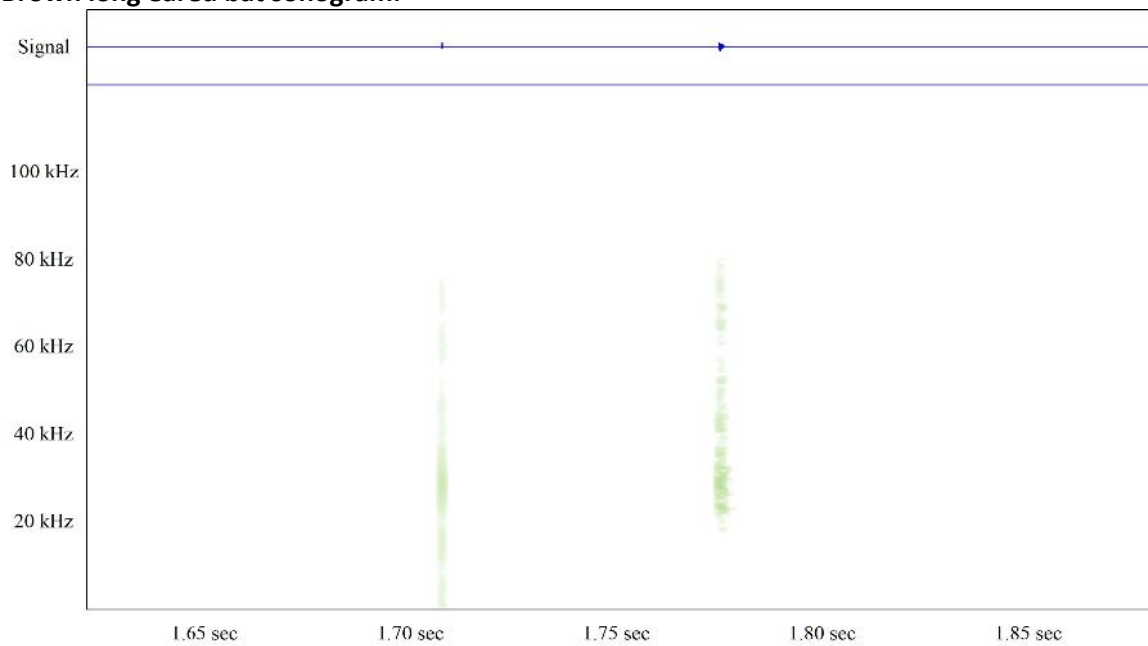


### Common Pipistrelle peak frequency.



The presence of Brown long eared bats was confirmed by the bats being seen in flight, the presence of 7 bats in the roof space of Building A when the bat consultant visited the site on the 8<sup>th</sup> August 2017. 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.





## Birds.

There was no evidence of birds nesting in the dwelling and there are no opportunities for birds to nest in the building.

There are nesting opportunities in the garage and the sheds but there was no evidence of nesting.

## Conclusion.

There was no evidence of bats using the dwelling as a place of shelter.

There is a roosting opportunity for bats to the verge and underside of the ridge tiles on the southern gable.

There is access to the verge where the verge meets the chimney on the northern gable.

In order to determine if these are being used by bats two emergence surveys were undertaken. No bats were seen to emerge from the property. No bats were seen to emerge from the property. The extension of the property can retain these roosting opportunities.

The garage/store only offers a very poor place of shelter for bats and its re-use or demolition will not affect a place of shelter for bats.

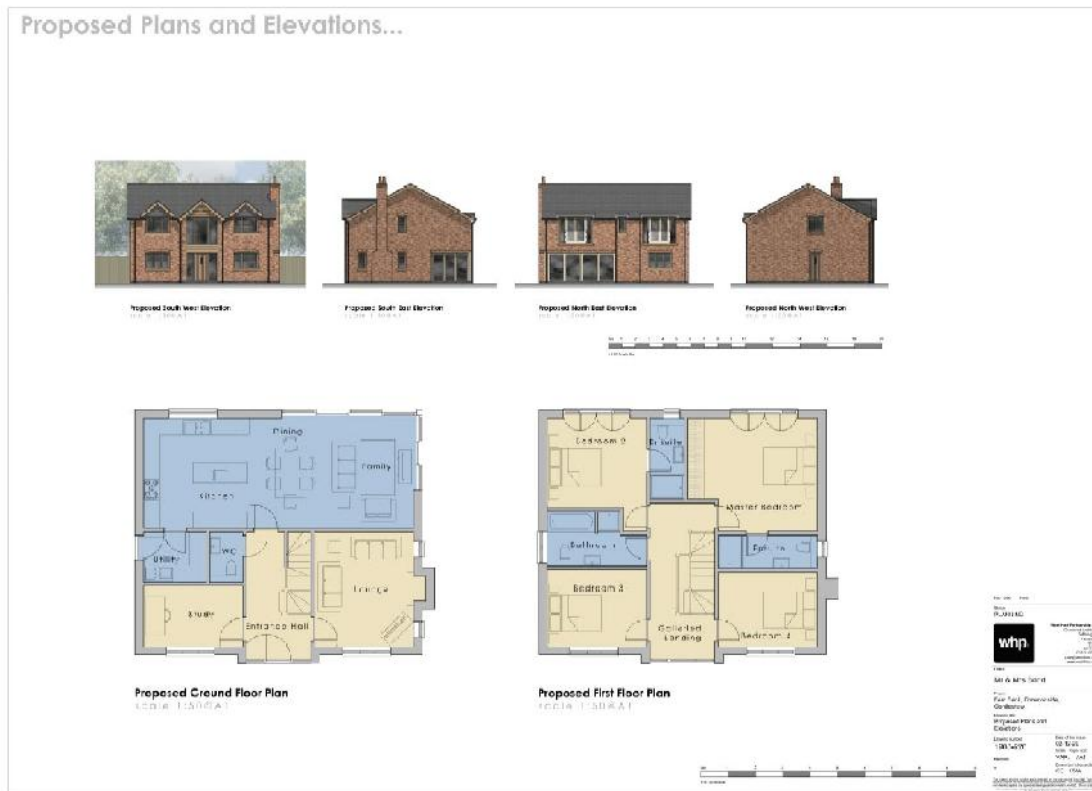
The extension of the dwelling will not affect nesting birds.

The demolition of the garage/store and the sheds will not affect nesting birds.





The proposal is to replace the existing dwelling with a new dwelling.



New bat roosting can be created in the new dwelling by installing two brick built bat boxes to replace the existing potential bat roosting.

### Impacts on bats.

The demolition of the property will have no impact on bats. 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.

## Enhancements for bats.

Enhancements for bat roosting can be created by installing two brick built bat boxes on the new dwelling.

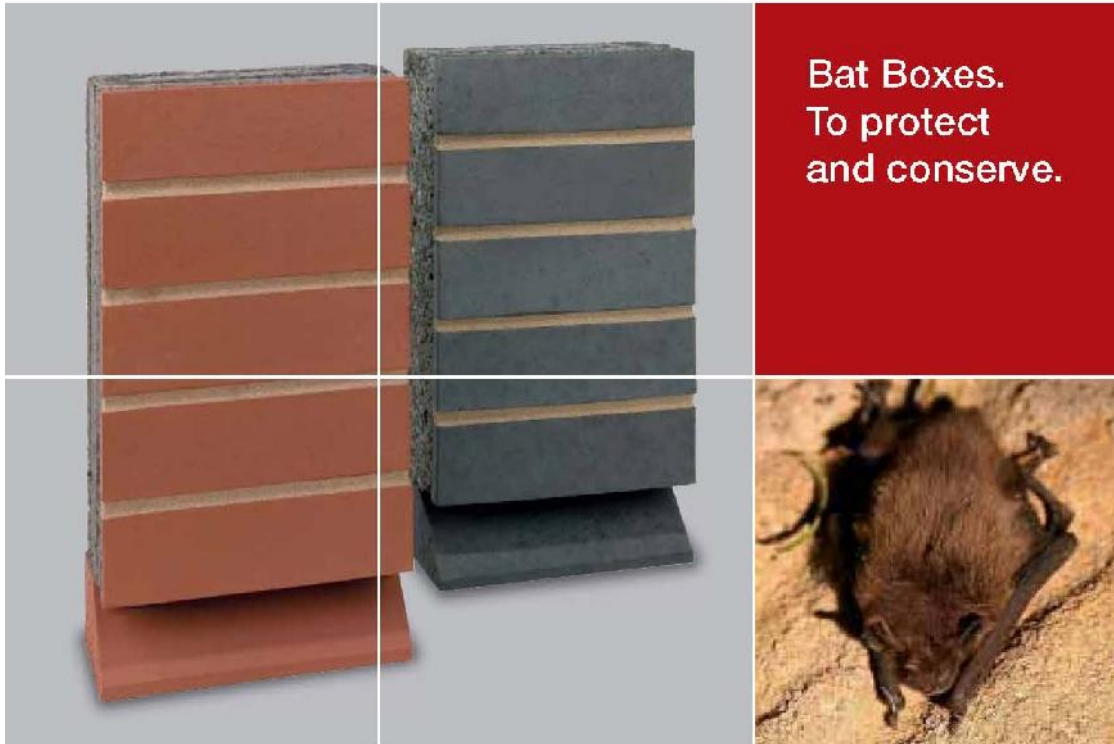


## Brick built bat boxes.

A brick built bat box can be installed at the gables of two elevations on 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.



**Bat Boxes.  
To protect  
and conserve.**



Birmingham and the Black Country  
Cumbria  
Derbyshire  
Devon  
Durham  
Leicestershire  
Lincolnshire  
London  
Staffordshire  
Sussex  
Wiltshire

Wienerberger has worked closely with EcoSurv Ltd. to create a brand new range of eco-friendly bat boxes. Compared to existing bat boxes on the market, the Wienerberger bat box is larger and features an innovative arrowhead structure which helps maintain the bats body temperature in order for them to flourish.

The bat box is designed to encourage the most popular bats found in the UK, such as Pipistrelles, Natterers, Whistlers and Brandts bats. Other bat box options are available for other breeds via special order.

Bats are an important part of our natural landscape. The latest legislation to protect bat species and their habitats has now brought the UK in line with the rest of Europe and made bat conservation mandatory on any new building project where bats may exist.

Our bat boxes also help towards gaining additional ecological points to meet the requirements of the Code for Sustainable Homes.

Our bat boxes are currently available in Staffordshire Smooth Red and Smooth Blue but can also be manufactured to any colour in our range.

Further detailed information on Wienerberger bat boxes and bat conservation is available at [www.brick.co.uk/batbox](http://www.brick.co.uk/batbox) or contact Design Services on **0161 491 8200**

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.

There should be no direct illumination of the new bat roosting opportunity. 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 be printed and handed to contractors on site.

### **Method of working.**

There is no evidence of bats using the buildings as a place of shelter but it is possible that individual bats may use the possible roosting site in the verge in/on the northern gable and in the verge/ridge tiles on the southern gable 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 common species of bats that are likely to roost in buildings of this nature and are evidenced from the regional records, are crevice dwelling bats, such as the Common Pipistrelle. These bats are small and can use accesses as little as 50mm x 20mm. when found in buildings they appear no bigger than a thumb and have dark brown fur.



It is common to find bat droppings in places used by bats. These are small and often confused with mouse droppings. It is possible to distinguish between them as mouse droppings are hard whereas bat droppings, being only insect remains, crumble when rubbed between the fingers.





The other 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°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
- ✦ A lot 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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**ILP Guidance Note 8 Bats and Artificial Lighting, 2018**

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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).