Bat and Bird Survey for,
Mr. J. Brayne
Building opposite,
The Cottage,
Hill Top,
Brown Edge,
STOKE ON TRENT,
Staffordshire,
ST6 8TY.

Map Ref SJ 9083 5461
29th July 2016.

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Summary.

- **There is no evidence of bats using the building as a place of shelter.**
- **There was evidence of birds nesting in the building.**
- **There is a temporary roosting opportunity between the profile steel roof sheets and the timber sheeting rails of the workshop.**
- **There was no evidence of bats using the temporary roosting opportunity and such use would be transient. The surveyor believes therefore that emergence surveys are not necessary.**
- **The conversion of the building, if approved by the Local Authority must not occur if birds are nesting in the building until the young have fledged.**
- **A method of working should be put in place with contractors to ensure that in the event of bats being found they will not be injured.**
- **A new bat roosting opportunity can be created by installing a brick built bat box at the eaves on the eastern elevation, to meet the requirements of the National Planning Policy Framework (2012).**

Introduction.

An inspection and building survey for bats was requested by Mr. J. Brayne. The survey was to be undertaken in relation to the submission of a planning application to replace the existing workshop buildings with a new dwelling. The property was visited on the 28th July 2016 and the surveyor spent 0.6 hour on site. The weather had been dry with low cloud but light rain started as the surveyor arrived on site.



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 legal 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 October will produce bat activity, particularly providing information on forage areas, commuting routes and pre-maternity group roosting.

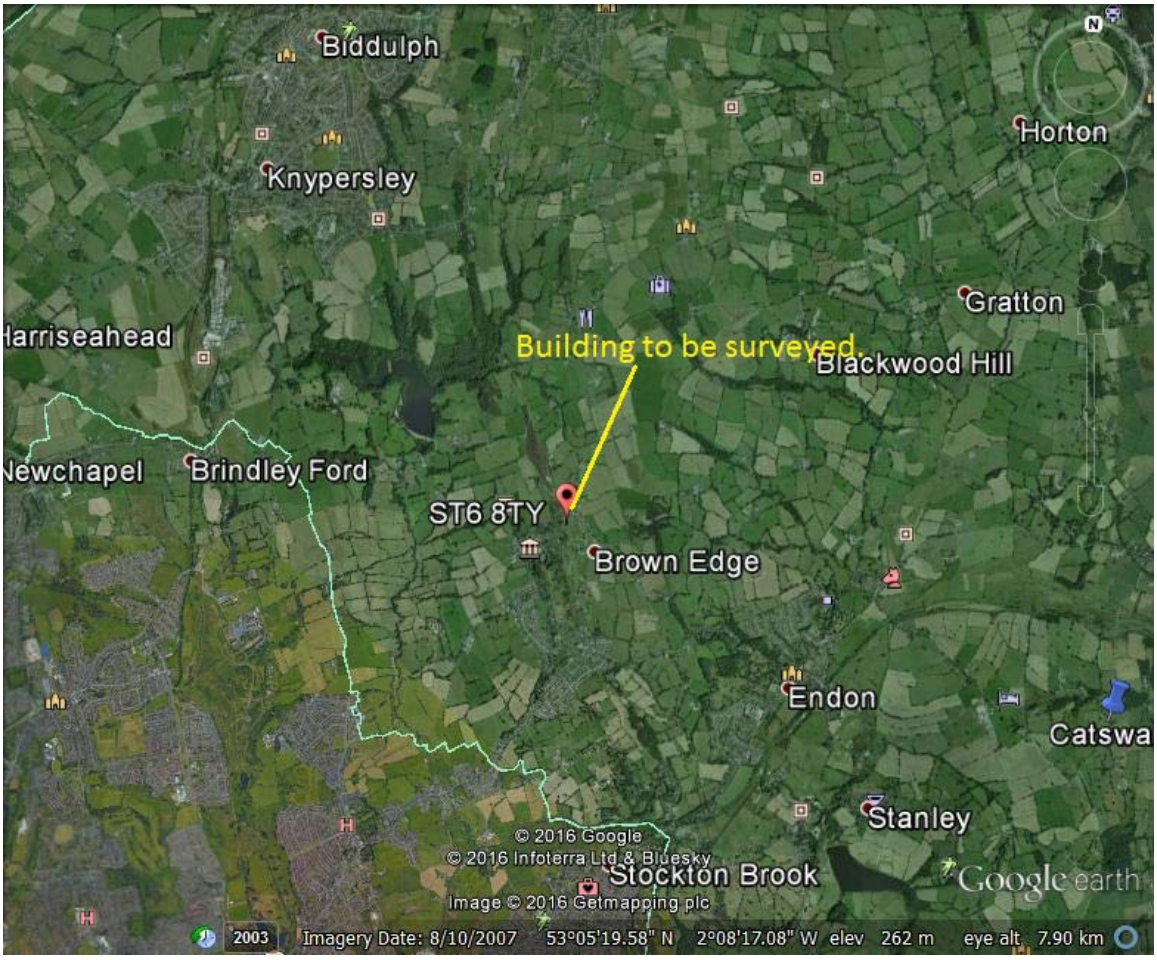
Any trees on site are surveyed following the methodology set out in the Bat Tree Habitat Key, Henry L Andrews et al 2013, which produces a key for identifying Potential Roost Features in trees and their likleyhood of being used by bats. Trees on any site being surveyed will have Potential Roost Features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

Bat records.

A search of public records has revealed the presence of;

Myotos daubentonii.
Myotis nattereri.
Nyctalus noctula.
Pipistrellus pipistrellus.
Pipistyrellus pygmeaus.
Plecotus auritus.

Bat roosts recorded by the surveyor within 3km have been a non-maternity group of Common pipistrelle bats.



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 day of the survey there was light rain commencing as the survey started. The surveyor does not believe that the weather masked any evidence or access points for bats. There were no constraints to the surveyor for the building survey for bats.

Building Survey.

The buildings to be surveyed consisted of a single storey steel portal framed workshop with a lean to constructed with a timber frame. It is currently being used as a workshop and store.

Building Design
CIAT
PROPOSED REPLACEMENT BUILDING AT
THE COTTAGE
HILL TOP
BROWN EDGE
STAFFORDSHIRE
ST6 8EY
MR & MRS J. BRAYNE
SURVEY AS EXISTING
B. BLAKEMAN CIAT
SIDE ELEVATION
FRONT ELEVATION
SIDE ELEVATION
REAR ELEVATION
GROUND FLOOR PLAN





The property is situated north of the small village of Brown Edge with agricultural land surrounding the village. To the north of the site is a large area of heathland. 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 village 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.

Steel portal framed building.




There is low level blockwork to approximately 1m with a single layer of vertical profile steel cladding above on the steel portal framed building.




The roof is covered with a single layer of profile steel cladding. There are profile steel flashings at the ridge and the verges. Bats cannot cling to profile steel cladding and will not use any crevices created between the cladding sheets and the flashings. Rapid heating and cooling of the cladding also makes use of the space unlikely.




The profile steel cladding is supported on timber sheeting rails. There is a gap between the sheeting rail and the profile steel cladding that could be used by individual bats. Use of the space is unlikely due to the rapid heating and cooling of the cladding sheets.




The ridge is partially open, part of it having been filled with an expanding foam. Whilst there is access at the ridge it can only be used by bats crawling across the profile steel cladding which is unlikely.



Bat roosting potential; Very Poor.

Lean to building.

This building has a timber frame made from old telegraph poles wit timber roof members and timber sheeting rails.




The building has profile steel cladding at the sides, with one area of low level blockwork. The roof is covered with profile steel sheets supported on timber sheeting rails.




The only place of shelter that could be used by bats is the space between the rear of the profile steel cladding and the timber sheeting rails. Use of this space would be unlikely because of the rapid heating and cooling of the profile steel cladding sheets.

Bat roosting potential; Very Poor.

Birds.

There was evidence of birds nesting in the building and there are opportunities for birds to nest in the building.

A single Blackbird's nest was found on one of the structural roof steels at the point where the steel portal frame meets the lean to structure. The nest was empty at the time of the survey.







Conclusion.

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

There are temporary roosting opportunities for bats in the workshop but no evidence of bats. The roosting opportunities are between the sheeting rails and profile steel cladding sheets. The likleyhood of bats using the space is very poor due to rapid heating and cooling of the steel sheets. Because of this surveyor does not believe that emergence surveys of the workshops are necessary. The conversion of the workshops and lean to must be undertaken following the method of working below so that harm to bats is avoided.

The conversion of the workshop and lean to will affect nesting birds.

In order that there is no disturbance to nesting birds this building is not to be demolished between March and the end of August in any year unless a survey for nesting birds has been undertaken and it can be clearly shown that birds are not nesting in the building.

Impacts on bats.

The conversion of the property will have no impact on bats due of the loss of the temporary roosting between the rear of the profile steel cladding and the timber cladding rails. The method

of working below must be followed to ensure that the potential for disturbing or harming bats, however small, is minimized and avoided.

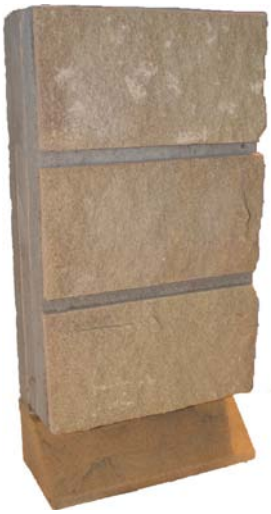
There is no loss of habitat from the proposed conversion and there will be no impact on habitat, forage or commuting routes from the proposed development.

Enhancements for bats.

Records and the surveyors own surveys 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).

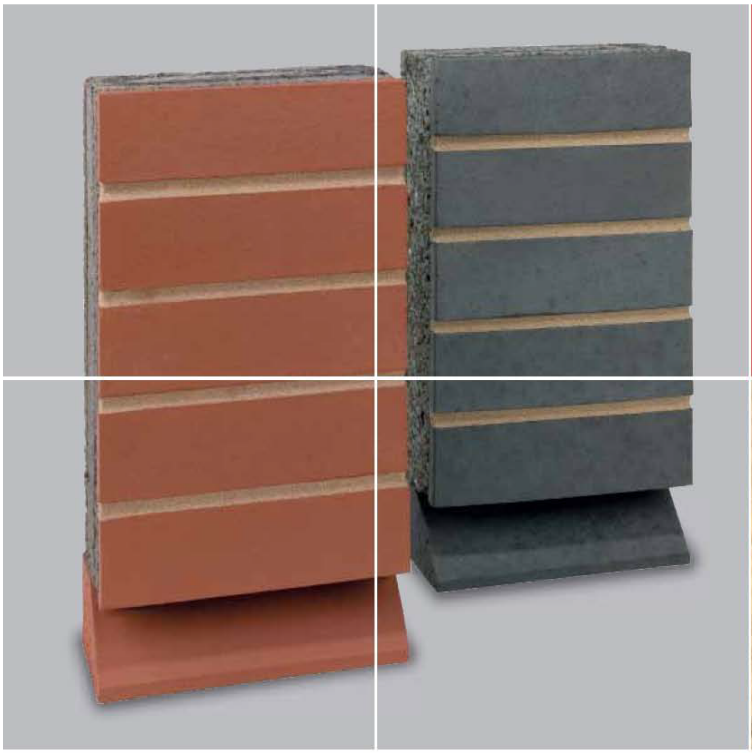
A brick built bat box can be installed at the eaves of the eastern elevation of the new dwelling, should planning permission be granted. These are constructed from brick or concrete blocks and are built into the outer leaf of brickwork. They can have facing bricks or be rendered. They provide no access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





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

Wienerberger
Building Value



Bat Boxes.
To protect
and conserve.



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ECOLOGICAL CONSULTANTS

KENT WILDLIFE INVESTORS

THE wildlife TRUSTS

Birmingham and the Black Country
Cheshire
Derbyshire
Devon
Durham
Lancashire, Greater Manchester & North Merseyside
Staffordshire
Surrey
Sussex

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, Natterer's, Whiskered and Brandt's 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.

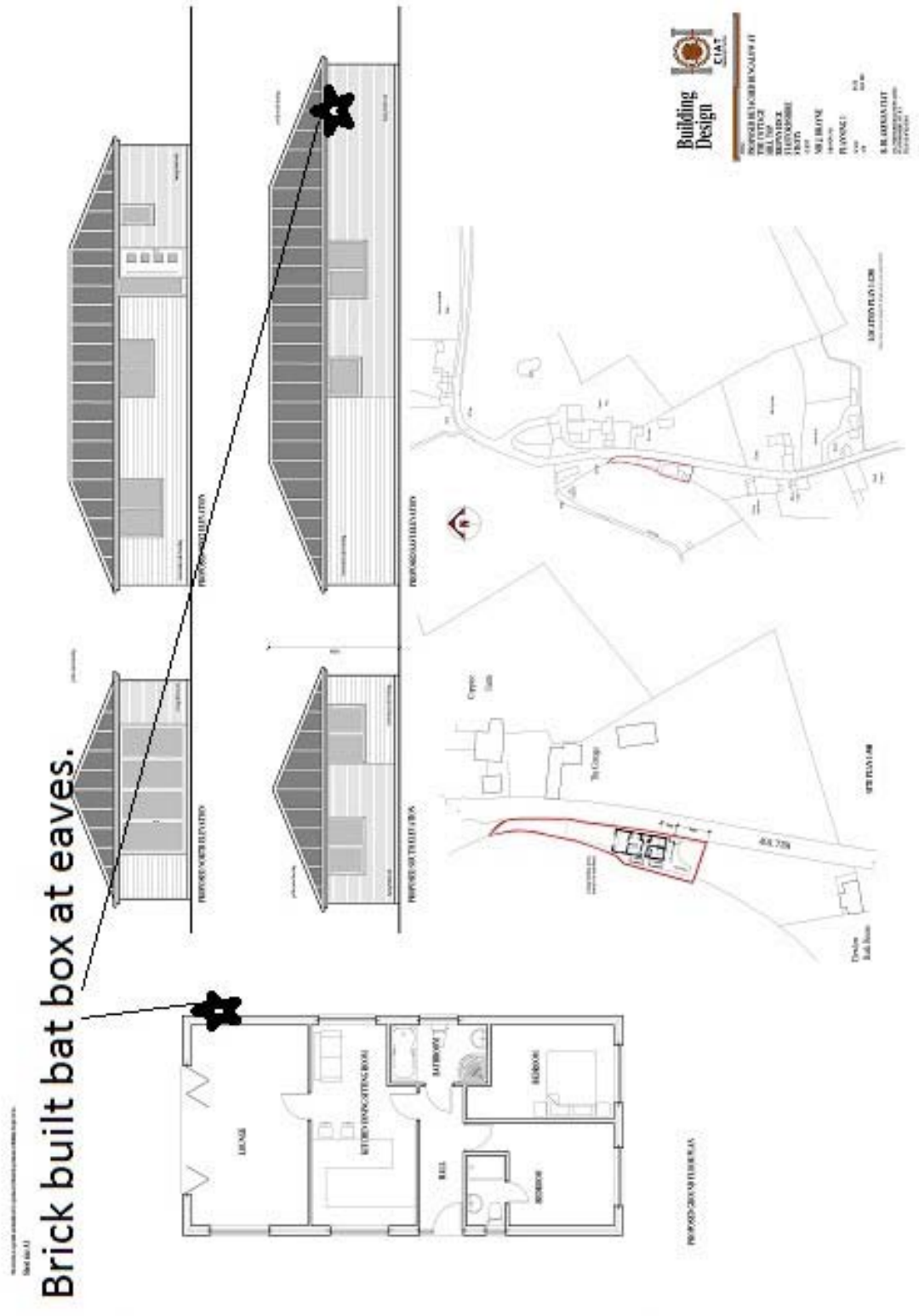
Our bat boxes also help towards gaining additional ecological points to meet the requirements of the Code for Sustainable Homes.

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 or contact Design Services on 0161 491 8200

A location away from doors and windows has be chosen so that droppings falling from the bat box will not cause a nuisance for the occupiers. This will also benefit from being close to the hedgerow giving commuting bats cover very quickly after emerging from the new roosting

opportunity. An east facing elevation will also benefit from solar gain and will provide a warm roost for crevice dwelling bats.



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 no evidence of bats using the workshop buildings as a place of shelter but it is possible that individual bats may use the possible temporary roosting sites between the sheeting rails and the profile steel cladding sheets 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
- 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).