

**Preliminary Bat Roost Assessment and Bird
Survey for,
Mr. A. Angrave of Markfield Equestrian Centre.
Buildings at,
Markfield Equestrian Centre,
Stanton Lane,
Markfield,
LEICESTERSHIRE,
LE67 9TT.**

**Map Ref SK 4714 1127
9th May 2024.**

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Natural England Bat Mitigation Class License

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Summary.

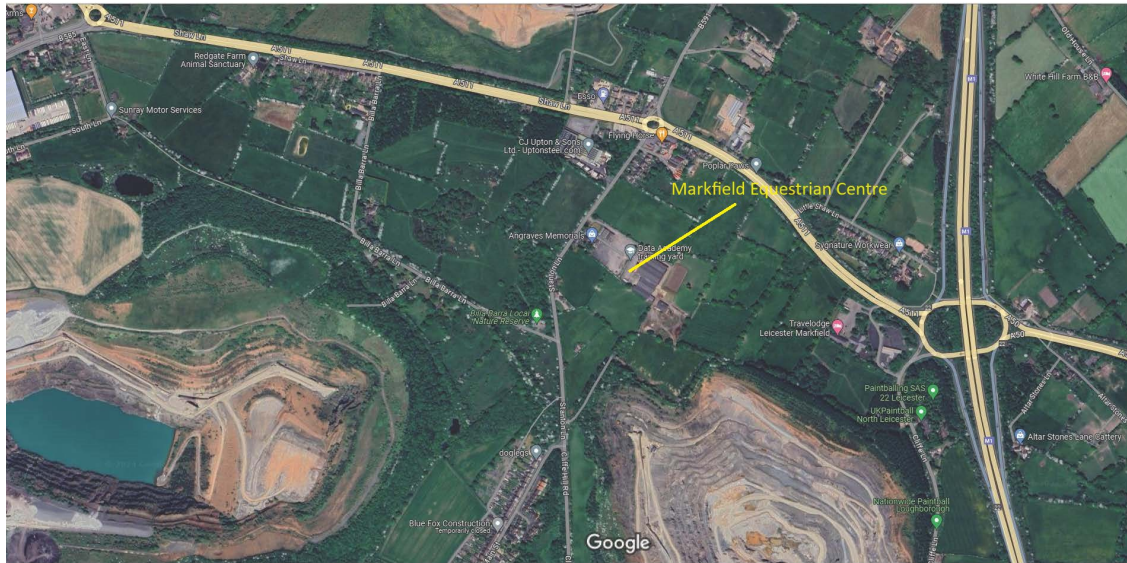
- There is no evidence of bats using the buildings as a place of shelter.
- There was evidence of birds nesting in the building.
- There is a roosting opportunity under the hanging tiles on the rear of Building 1. This will not be affected by the current proposed change of use.
- There is a roosting opportunity between the rear of the hanging tiles on the front elevation of Building 6. This will not be affected by the current proposed change of use.
- Emergence surveys are required to determine if bats are using these features as a place of shelter if works in the future are proposed to the features on Buildings 1 and 6.
- There are birds nesting in Building 5.
- The conversion of the building, if approved by the Local Authority must not occur if birds are nesting in the building between the beginning of March and the end of August until the young have fledged.
- 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 C T Planning on behalf of Mr. A. Angrave of Markfield Equestrian Centre. The survey was to be undertaken in relation to the submission of a planning application to change the use of the existing buildings. The property was visited on the 19th February 2024 and the surveyor spent 1.5 hour on site.

Temperature; 13°C Wind; 0-1 Beaufort Scale Cloud Cover; 7/8th.

Google Maps



Imagery ©2024 Airbus, Bluesky, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, Map data ©2024 100 m

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.

<https://www.theguardian.com/business/2020/11/housebuilder-fined-600000-destroying-bat-roost-south-london-bellway>

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 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.

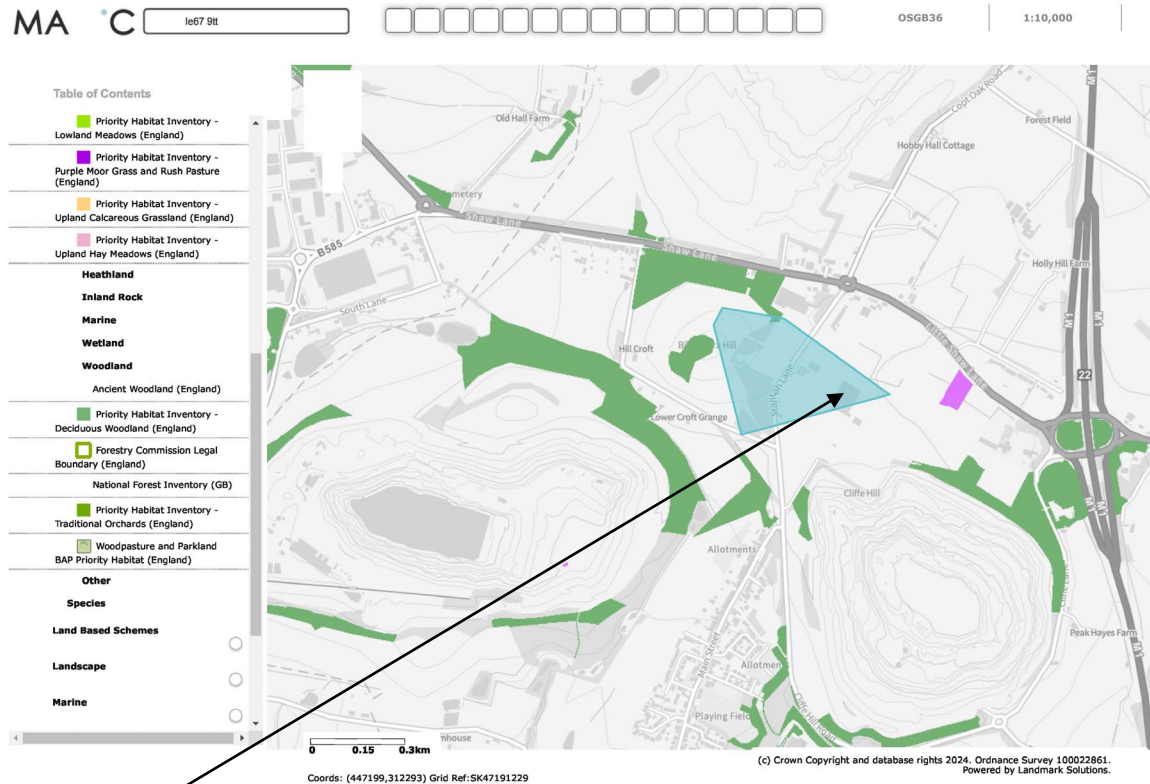
Bat records and habitats.

A search of public records has revealed the presence of the following bats within 3km of the site;

Myotis nattereri..
Myotis daubentonii.
Myotis mystacinus.
Nyctalus noctula.
Nyctalus Leisleri.
Pipistrellus pipistrellus.
Pipistrellus pygmaeus.
Pipistrellus Nathusii.
Plecotus auritus.

A search of the DEFRA MAGIC Dataset shows that there are no habitats adjacent to the site which of a special nature conservation status or significance. There are areas of Deciduous Woodland on the Priority Habitat Inventory to the east, west and south of the site. There is agricultural land surrounding the site with large quarry areas. There is an area of Good Quality Semi-Improved Grassland to the east of the site. The areas of deciduous woodland on the

Priority Habitat Inventory in the landscape will provide forage opportunities for bats and there is moderate connectivity between the woodlands, the hedgerows being a mixture of hedgerows with some mature trees and some being post and wire fences.



Markfield Equestrian Centre.

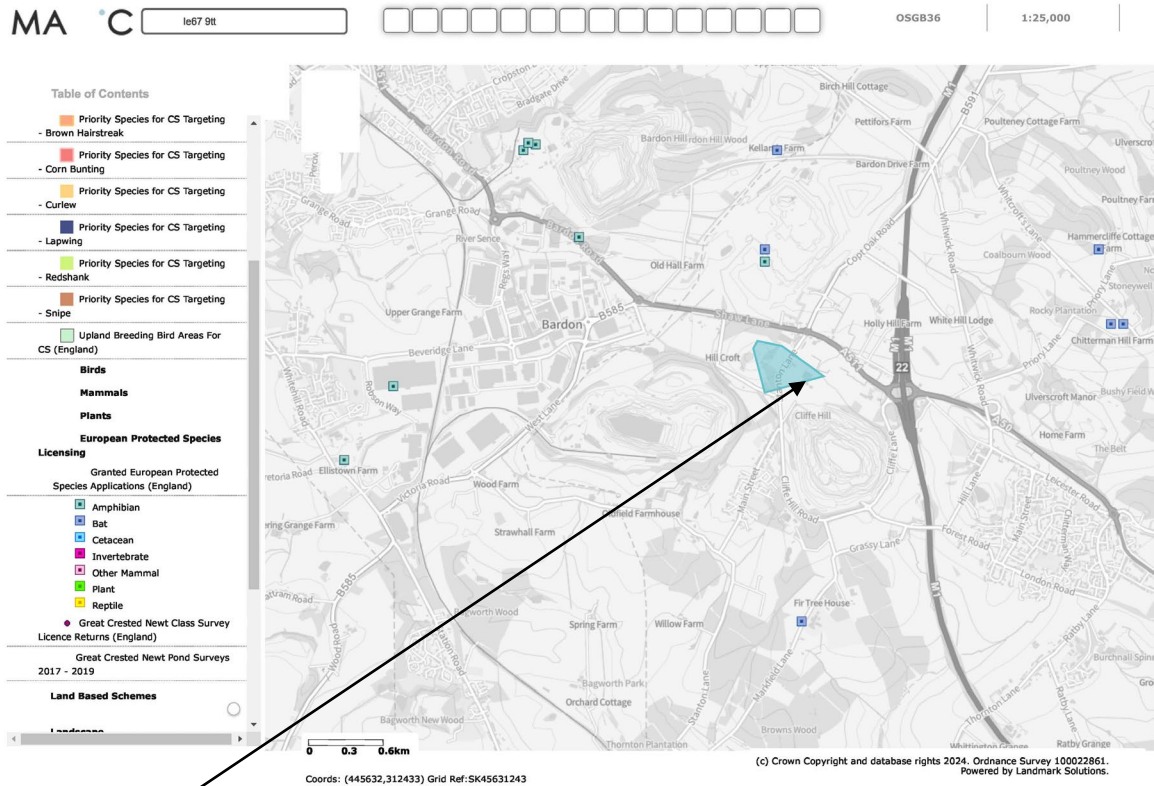
A search of the DEFRA MAGIC Dataset shows that the site falls inside of a Farm Wildlife Package area where there is support for Willow Tit through Countryside Stewardship targeting. To the south of the site is the Cliffe Hill Quarry Site of Special Scientific Interest. The site does not fall into the buffer zones around the Deciduous Woodland to the east, west and south of the site. There are no other biodiversity enhancement areas adjacent to the site.



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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, Common pipistrelle bats	No	Yes
Brown long eared, Common pipistrelle, Whiskered bats.	Yes	Yes
Common pipistrelle bats.	Yes	Yes
Brown long eared, Common pipistrelle, Natterer's bats.	Yes	Yes
Brown long eared, Common pipistrelle, Whiskered bats.	Yes	Yes
Common pipistrelle, Brown long eared bats	Yes	Yes



Markfield Equestrian Centre.

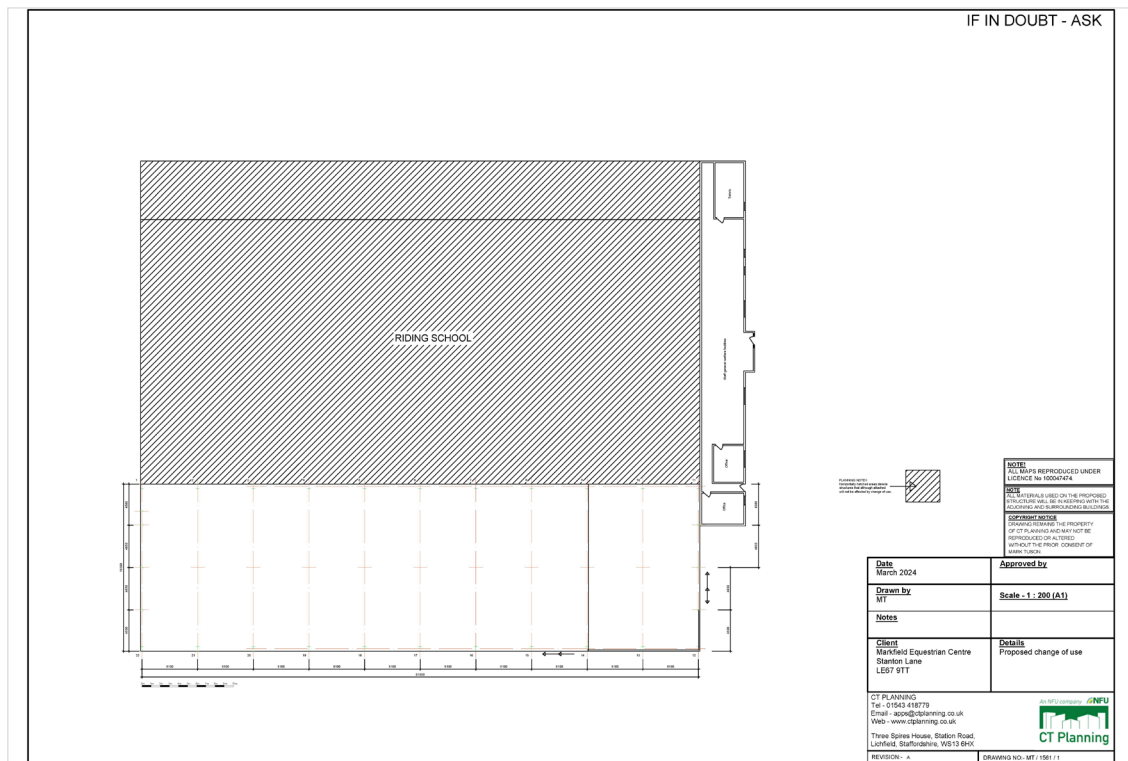
Constraints.

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 group of steel portal framed buildings with a pitched roof covered with fibre cement sheets.





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.

Building 1.

The building is a steel portal framed building with a pitched roof.



The roof is supported on Z section galvanized sheeting rails which offer no opportunity for bats to roost in the space between the rear of the roof sheets and the sheeting rails.



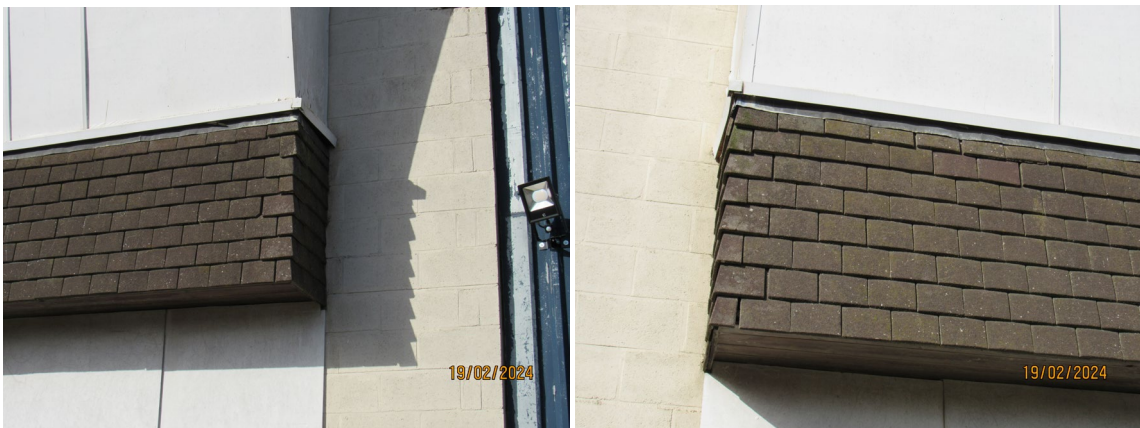
The roof is supported on Z section galvanized sheeting rails which offer no opportunity for bats to roost in the space between the rear of the roof sheets and the sheeting rails.



There is a low level concrete block wall, which has concrete/mortar fill, around the edges of the building. There is no roosting opportunity for bats in the wall.

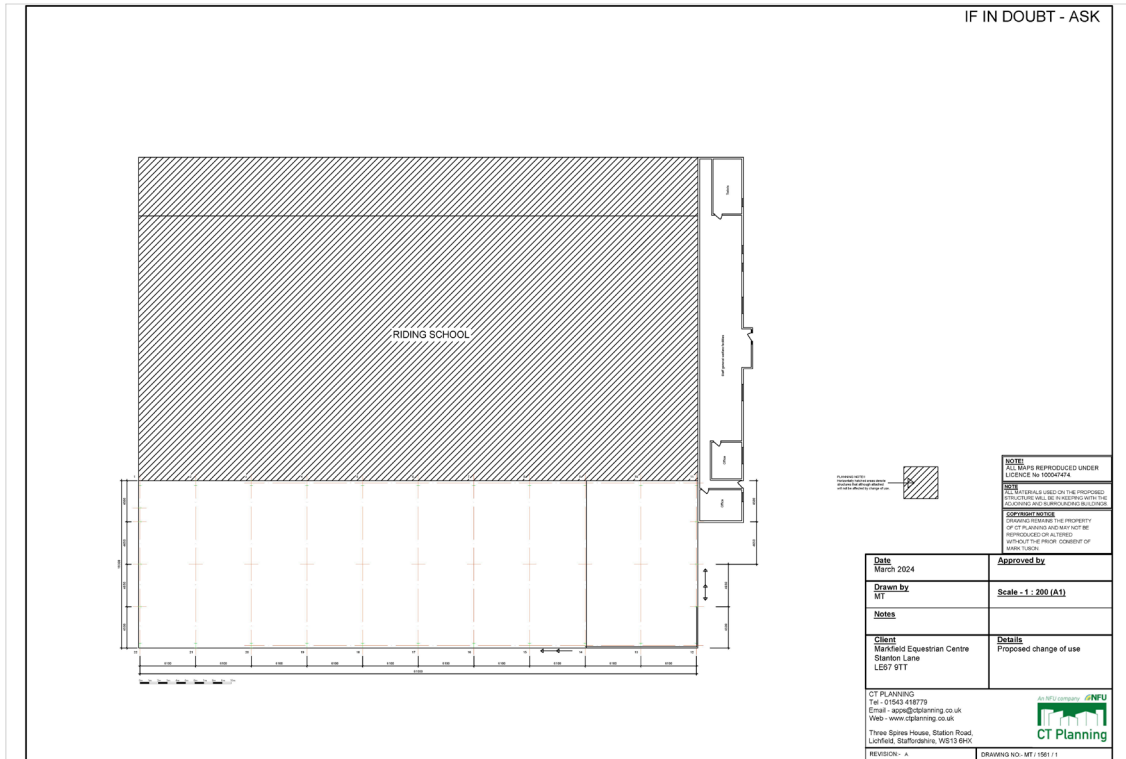
On the rear elevation there is a small office overlooking the menage. This has a mineral felt roof covering and hanging tiles. There are no bat roosting opportunities under the mineral felt roof or the uPVC fascia boards.

There is one broken hanging tiles which offers a place of shelter for bats in the rear of the hanging tiles. Emergence surveys are necessary to determine if this area is being used by bats..





Bat roosting opportunities; Possible.



Building 2.

The building is a steel portal framed building with an internal menage.



The fibre cement roof sheets are supported on Z section galvanized sheeting rails which offer no opportunity for bats to roost in the space between the rear of the roof sheets and the sheeting rails.



The roof is supported on Z section galvanized sheeting rails which offer no opportunity for bats to roost in the space between the rear of the roof sheets and the sheeting rails.

There are no bat roosting opportunities in the building.

Bat roosting opportunities; None.

Building 3.

The building is a steel portal frame with an extension that adjoins Building 2.



The fibre cement roof sheets are supported on Z section galvanized sheeting rails which offer no opportunity for bats to roost in the space between the rear of the roof sheets and the sheeting rails.



The roof is supported on Z section galvanized sheeting rails which offer no opportunity for bats to roost in the space between the rear of the roof sheets and the sheeting rails.

There is a single storey flat roofed building within the steel frame. This has a chipboard flat roof on timber joists with uPVC fascia boards. There are no bat roosting opportunities in the building.



Bat roosting opportunities; None.

Building 4.

The building is a steel portal frame open sided hay store with a pitched roof. The roof is covered with fibre cement sheets supported on timber sheeting rails. There is an exceptionally poor place of shelter for individual bats between the rear of the fibre cement roof sheets and the timber sheeting rail. The likelihood of this is exceptionally small and can be managed by contractors following the method of working set out below.



Bat roosting opportunities; None.

Building 5.

The building is a steel portal framed building with some stables and loose boxes. The roof is covered with fibre cement sheets supported on galvanized Z purlins/sheeting rails. There are no roosting opportunities for bats.



The buildings has some vertical profile steel cladding and some hit and miss timber cladding with no places of shelter for bats.



Bat roosting opportunities; None.

Building 6.

The building is an area of largely single storey rooms with a mono pitch roof. There is a two storey section with a pitched roof.



The walls are painted blockwork with uPVC fascia boards and soffits with no access for bats.



The single storey section of roof is pressed steel imitation pan tiles with no access for bats.



There are pressed metal flashings over the hips but there is little chance of bats moving across the surface of the pressed metal sheets so the likelihood of bats using this area is nil.



Where the monopitch roof adjoins the vertical profile steel cladding there are lead flashings. There is no access under the lead flashings for bats.



On the roof of the two storey section of Building 6 there are interlocking plain tiles over a bitumous underfelt.



There is no access under the tiles except where the tiles go under the vertical profile steel cladding and the lead flashing has come away. This allows bats to crawl under the interlocking plain tiles to the space between the rear of the tiles and the bitumous underfelt.



There are half round ridge tiles which have a number of gaps that give bats access to the space between the rear of the ridge tiles and the bitumous underfelt.



On the front elevation of the two storey section of the building there are hanging tiles.



There are a number of missing hanging tiles that give bats access to the space between the rear of the plain tiles and the bitumous underfelt.



There is missing mortar at the verge that gives access for bats to the space between the rear of the interlocking plain tiles and the bitumous underfelt.

There are bat roosting opportunities in the building which require emergence surveys in order to determine if bats are using them as a place of shelter.

Bat roosting opportunities; Possible.

Birds.

There are bird nesting opportunities on the steel portal frames of all of the buildings.

There is evidence of pigeons and sparrows nesting in Building 3 and Building 5.

Sparrow nesting between steel and vertical cladding.



Pigeon nesting.



If birds begin to nest in any of the areas being developed between the beginning of March and the end of August in any year then work must stop until the young have fledged.



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Conclusion.

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

There are roosting opportunities for bats under the hanging tiles of Building 1.

There are bat roosting opportunities under the hanging tiles of the two storey section of Building 6. There is also access on this part of the building for bats to roost between the rear of the interlocking plain tiles and the bitumous underfelt. These provide sites which under the Bat Survey Guidelines are classified as having Moderate bat roosting opportunities. The Bat Surveyor does not believe that they provide high roosting potential because of the high levels of flood lighting around the site.

Two emergence surveys of each area are required to determine if bats are using these areas as a place of shelter.

Birds are nesting in Building 3 and Building 5 and there are opportunities for nesting in all of the buildings on site. If birds begin nesting between the beginning of March and the end of August in any year then work on this area cannot proceed until the young have fledged.

Impacts on bats.

The development of the property may have a negative impact on bats due to the loss of the potential roosting under the hanging tiles and interlocking plain tiles.. 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.

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 buildings as a place of shelter but it is possible that individual bats may use the possible roosting sites under the hanging tiles, the interlocking plain tiles and those uncovered during the development 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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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).